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# Infantry

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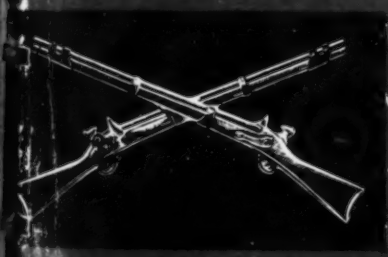

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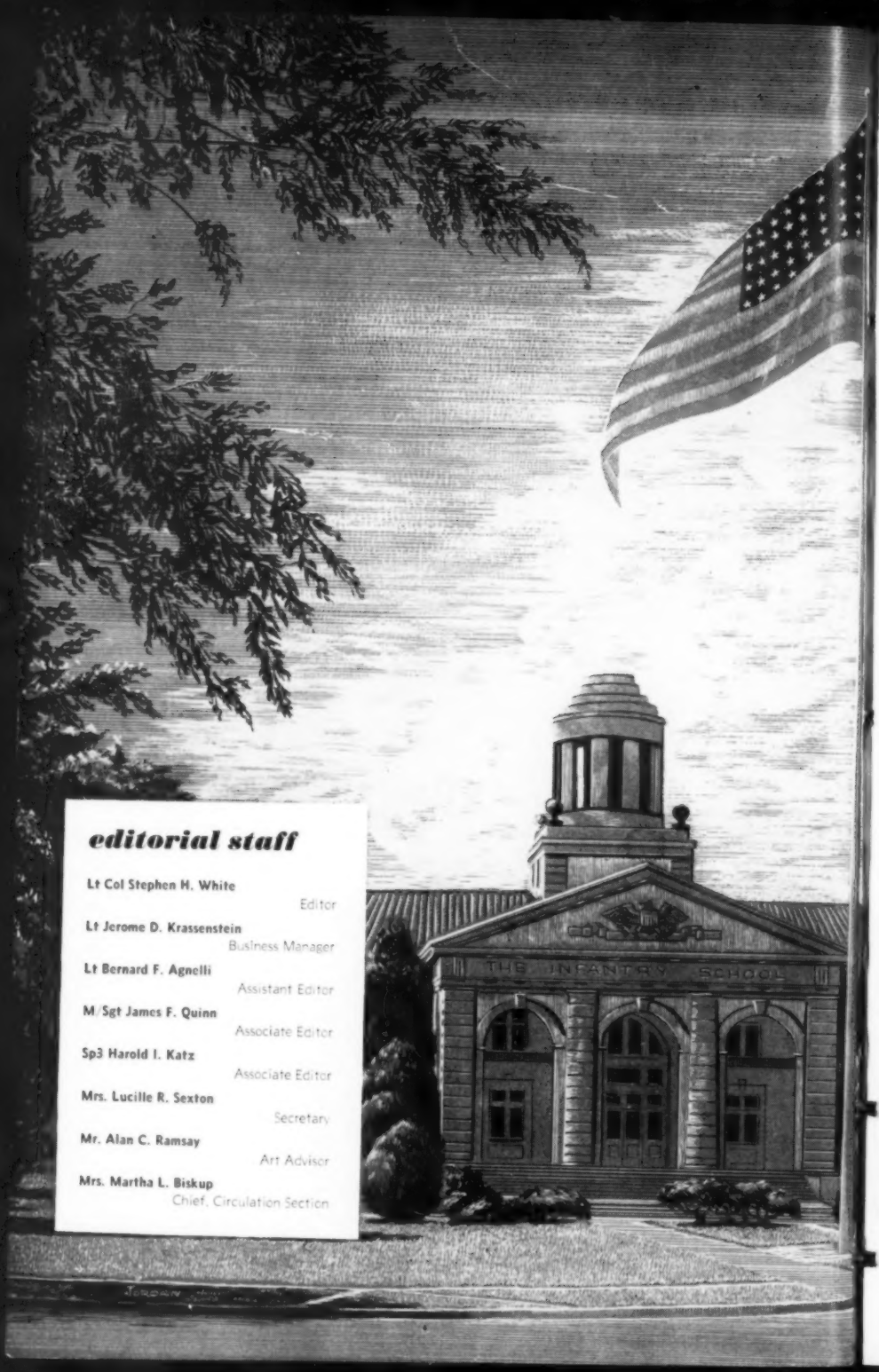


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# Infantry

OFFICIAL QUARTERLY PUBLICATION OF
UNITED STATES ARMY INFANTRY SCHOOL

volume 47 number 2 april 1957

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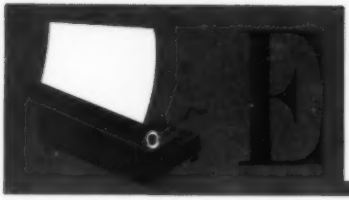


# EDITOR'S PAGE

Dear Reader:

The name of the magazine is now *Infantry*. We have dropped "School Quarterly" from the official title. This has not been done on impulse or merely to save printers ink. It is a step that is in keeping with modern magazine technique and one that has been considered for some time. The decision to shorten the title at this time was influenced by the redesignation of The Infantry School as the United States Army Infantry School which would have further lengthened an already wordy title. To clearly identify the source of *Infantry*, the statement "Official quarterly publication of United States Army Infantry School" is printed beneath the title block on page 1. While the name has been shortened, the mission and contents remain unchanged. *Infantry* will continue to publish the latest information and thinking on concepts, doctrine and techniques to assist Infantrymen and those who work with Infantry.

Also new is a permanent subscription plan. Permanent subscribers will be billed $2.25 each year until termination of the subscription is requested. This, of course, can be done at any time. The new plan eliminates renewal action, assures continuous delivery and saves money. Present subscribers who wish to convert to the permanent plan may do so at any time. The first bill under the new plan would be sent upon the expiration of the subscription now in effect.

THE EDITOR

**Lacrosse, capable of being fired from a 2½-ton truck, is the latest announced addition to the Army's growing family of surface-to-surface guided missiles. For more about this new close-support weapon turn to page 111.**

# LETTERS TO THE EDITOR

### Couldn't Put It Down

Sir:

I am a newly appointed second lieutenant, Infantry, in the 38th Infantry Division, Indiana National Guard.

The platoon sergeant in my platoon not long ago passed on to me the January 1957 issue of the *Quarterly* and, I must confess, I couldn't put it down until I had read every bit of the information in it. It is, indeed, a shame that more Guardsmen have not been exposed to the helpful articles in the *Quarterly*.

In regard to the Quarterly Index [January 1957 issue], are the articles listed available in individual copies?

Enclosed is my check to cover a two year subscription to the *Quarterly* and the *Quarterly* Book Binder.

Robert F. Huntington
2d Lt, Infantry
Hq & Hq Co, 38th Infantry Division

*In the near future other National Guardsmen will be given an opportunity to become better acquainted with* INFANTRY. *We will write to National Guard division commanders with a request that* INFANTRY *be brought to the attention of the officers and noncommissioned officers in their units. It is hoped that many Guardsmen will come to Lt Huntington's conclusion about the value of this official Infantry School publication. About the* QUARTERLY *Index: We have no facilities to furnish reprints of all* QUARTERLY *articles. However, the Book Department has copies of most back issues which are available at $.50 each. Write: Book Department, U.S. Army Infantry School, Ft. Benning, Ga.*
*—Editor.*

### Sword of Silk

Sir:

I have read with great interest Capt Bashore's story of German General Kurt Student, "Sword of Silk" [October 1956, January 1957]. My only objection to the article is that it just wasn't long enough!

Can you possibly tell me where I can obtain biographical material on Gen Student? I would like to get as much as possible.

George H. Rhodes
Capt, Inf, USAR
Atlanta, Georgia

*We too regret that "Sword of Silk" could not have been longer. Capt Bashore had to do considerable compressing to cover German airborne activities in the space that could be devoted to this subject. The only practical source we know of for biographical material on Gen Student which might be available in this country is the Office of the Chief of History, Department of the Army, Washington 25, D. C. We understand this office maintains such data.—Editor.*

### Don't Focus on Big Picture?

Sir:

. . . do not let big-picture material crowd out your valuable nuts-and-bolts coverage. *Armor* magazine, in an editorial some months ago, said you fulfill the need of the foot soldier, vacated by

*Combat Forces Journal* (now *Army*) when it took to big-picture material and policies. Keep your articles on the *troop* level for Infantrymen like me and the sergeants who read my copy of the *Quarterly*. Publish more on small unit tactics, troop leading, hardware, training, down-to-earth administration and logistics, and material to keep the intelligence trade alive at unit level. Don't argue Infantry primacy; leave it to *Army*.

Louis R. Jones
Capt
Fort Monmouth, N. J.

*The sole purpose of the* QUARTERLY *is to help Infantrymen and those who work with Infantry at regimental (now battle group) level and below with emphasis on "below." Each item published is evaluated with this purpose in mind. We strive constantly to provide the "nuts-and-bolts" coverage which readers expect of* INFANTRY.

*Of course, space limitations do not permit us to repeat or rehash material previously covered in the* QUARTERLY, *training literature or other publications. We must concentrate on changes and new material—particularly new thinking and new developments in Infantry doctrine and techniques.*

*At times we publish articles which, at the first glance, may appear to be "big picture." But close analysis invariably reveals that the subject matter is basic and has definite value for most, if not all, Infantrymen. Articles such as "Invitation to Think" (October 1956), "Feet on the Ground" (January 1957) and "Cracking the Thought Barrier" (page 46 of this issue) are examples. This type of material can be helpful both to the individual and to the Infantry as a whole. In fact, it can be just as important as more specific items on organization, tactics, weapons, administration, logistics, etc., because it stimulates thinking and motivates actions that will produce better Infantrymen and a better Infantry.*

*However, as you point out, this type of material must not "crowd out" other essential information. We do not permit this to happen. All valid material which we receive or which we can generate that will help Infantrymen at troop level is published. You and others can help us to do a better job in this respect by passing on to us information or new techniques which have been developed in your units and which will assist all Infantrymen.*

*—Editor.*

**Permission Granted**

Sir:

Permission is requested to extract the article "Infantrymen Without Crossed Rifles" from your January 1957 issue for publication in our *Information Bulletin*. This bulletin is published locally for the members of our reserve unit. . . .

The *Infantry School Quarterly* is considered by the officers and senior noncommissioned officers of this command to be among the top of the military publications.

Winston D. Chapman
42d Special Infantry Co, USMCR
Pittsfield, Mass.

*We are happy to have* QUARTERLY *articles reproduced. It is our desire that all material which will help Infantrymen be widely circulated. Anything appearing in this publication may be reprinted with or without credit unless permission is specifically denied by a statement accompanying an article. We are particularly pleased when we hear that* INFANTRY *is helpful to members of reserve units. One of our major purposes is to keep reserve Infantrymen up to date on changes and new developments.*

*—Editor.*

R

AN IMPORTANT *INFANTRY* FIRST

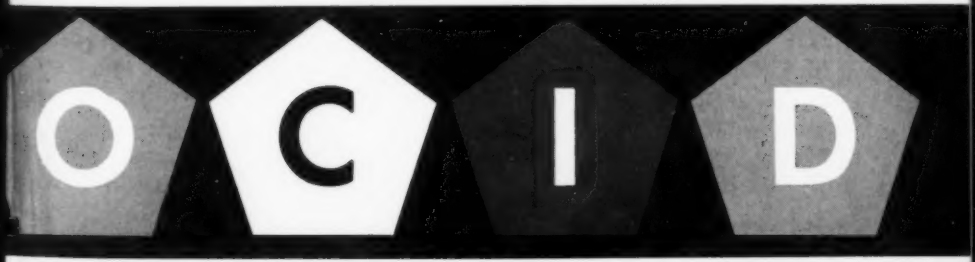
# why five?

***Here is the new Infantry division — an atomic age unit with a pentagonal structure which will be of great importance to all Infantrymen.***

One of the most dramatic and significant changes in the long evolution of the Army is now taking place. The division as we have known it since the days of World War II is being reorganized. Department of the Army has announced that all of our divisions—Airborne, Infantry and Armored—will be revamped.

This development has come after much study, experimentation and testing. It is designed to exploit new weapons, equipment and techniques resulting from the tremendous technological advances of the atomic age and to give us the organizations needed for combat on the modern battlefield. These new organizations implement what is known as the PENTOMIC concept. PENTOMIC is a coined word which describes the two principle features of the concept—a five-sided organizational structure and emphasis on capabilities for atomic warfare.

This concept visualizes that the combat zone in future warfare, particularly in an atomic war, will be greatly extended in depth. Combat action will be very fluid. Units will disperse to avoid detection and destruction by atomic weapons and converge to fight. The decisive margin of strength will lie in mobility and fast reaction time so that units will be able to live on the atomic battlefield and exploit the shock and devastation of atomic weapons. Tactical units must be small, independent groups capable of operating for limited periods on the battlefield. PENTOMIC in its most simple form is an organizational



structure which will exploit the latest technological advances in firepower, mobility and communications.

The first truly atomic-age unit organized under this concept is the 101st Airborne Division which was reactivated at Fort Campbell last September. The program under which this division was reorganized is known as ROTAD (Reorganization of the Airborne Division). The first real test of the PENTOMIC concept with a division-size unit was undertaken when the 101st embarked upon a four-month exercise, Jump Light. This test was completed in February. While results of the test are not yet available for publication it is expected that our other airborne divisions will be reorganized under the ROTAD program.

Following quickly on the heels of the reorganization of this first airborne division, Department of the Army has announced that our Infantry and Armored divisions also will be reconstituted under the PENTOMIC concept. The program under which Infantry divisions will be reorganized is called ROCID (Reorganization of the Current Infantry Division). The program for Armored divisions is ROCAD (Reorganization of the Current Armored Division).

To further test the PENTOMIC concept, more than 20,000 troops from the 1st Infantry, 1st Armored and 101st Airborne Divisions, along with personnel from other units including the 3d Infantry and 82d Airborne Divisions and the III Corps and XVIII Airborne Corps are now participating in Exercise King Cole in Louisiana.

As Infantrymen we are especially interested in the ROCID program. Ever since the PENTOMIC concept first became known, and particularly since announcement of a new organization for the Infantry division, there has been much curiosity and speculation about the five-sided structure. The questions that are being asked are reminiscent of the days when the old World War I "square" division gave way to the "triangular" division. Many Infantrymen accustomed to "squad right" of the "old Army" and faced with "column right" of the new organization wondered "Why?" But they saw the triangular organization take shape and prove itself in combat during World War II and again in Korea. Today, Infantrymen are again asking "Why?", particularly, "Why five?"

The answers to this and many other questions lie in a consideration of what an Infantry division will require and what it must be able to do to survive and to fight on the atomic-age battlefield. By combining past experiences in warfare with the results of study, experimentation and testing (under simulated atomic conditions) the Army developed criteria for an Infantry division that would meet the requirements of modern combat. It was determined that the Infantry division must be smaller, but have increased foxhole strength. It must have increased flexibility and be able to live and fight under atomic and nonatomic conditions. The combat elements of the division must have the necessary weapons and equipment to accomplish their normal missions. Balanced support must be provided. This support should include pools, at appropriate echelons, for equipment which may be needed only intermittently by the combat elements. Each headquarters should have as many subordinate units as it can effectively control, consistent with its needs. Maximum use must be made of technological advances. And, efforts must be made to increase air transportability.

As this basic guidance was translated into organizational plans, it was determined that a pentagonal structure

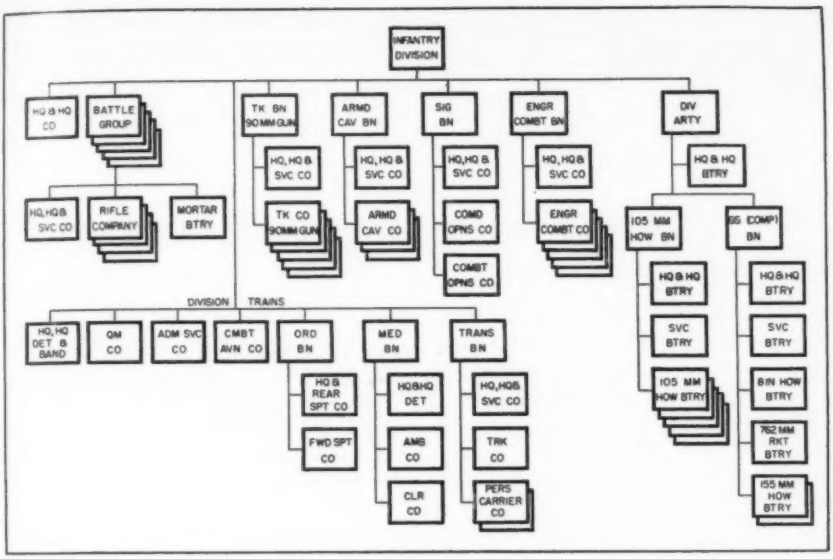



**Figure 1.**

would best provide the characteristics desired. A number of factors influenced the change from the triangular to a pentagonal structure. The five-sided organization permits an increase in Infantry foxhole strength while reducing the size of the principal tactical elements. It better utilizes the division's control facilities. The five-unit grouping eliminates one command level (the battalion), making the principal tactical elements more responsive to the division commander's control. It increases the division's flexibility and, finally, by virtue of increased firepower, mobility, and communications it enables the division to operate with greater dispersion between battle groups.

Now let's take a look at this new pentagonal Infantry division (Figure 1). Although the division's manpower has been reduced from 17,460 to 13,748, its mission and capabilities remain essentially the same as those of the current organization which it replaces. It is capable of sustained ground combat. It has greater firepower, increased battlefield mobility and good communications. While it is not designed to have the air mobility of the new airborne division, it does have better air transportability than the current Infantry division.

The major organizational changes incorporated into this new division are apparent at first glance. There are five battle groups,[1] each with four rifle companies and a mortar battery—there are no Infantry battalions. Logistical and administrative support units are grouped under a new division trains headquarters. The division artillery has an atomic capability. There is no organic antiaircraft unit. A brigade headquarters and a transportation battalion have been

[1]Since the term "battle group" replaces the term "Infantry regiment" in this new division, steps are being taken to preserve the names and traditions of the Infantry's historic regiments. From information available at the time this article went to press, it appears that the regiment is to be a parent unit from which battle groups will be drawn to form the Infantry commands of the new division. The regiment may consist of one or more battle groups in peacetime to as many as twelve or more battle groups in wartime. Each battle group will wear the insignia and carry the traditions of the parent regiment.

added. Some units have been reduced in size and incorporated into other units. Units which normally provide direct support for the battle group such as the tank battalion, engineer battalion, 105mm howitzer battalion, combat operations company of the division signal battalion, ordnance forward support company, etc., also are organized pentagonally.

Closer examination of the new division reveals the source of its increased firepower and mobility. Organic to the composite general support battalion of division artillery are atomic-capable weapons formerly available only from corps or higher headquarters. For example, the Honest John 762mm free-flight rocket has the range of medium- to long-range artillery. The launcher has considerably more battlefield mobility than conventional heavy artillery and it can fire a nonatomic missile or deliver an atomic warhead night or day in any kind of weather. Additional firepower is also found in the assault gun platoon of the battle group headquarters, headquarters and service company. This platoon provides the battle group with a hard-hitting antitank weapon. Initially, it will be equipped with the 106mm rifle but eventually it is expected to have the M-56, a 90mm self-propelled gun popularly known as SPAT, and later an extremely accurate missile, the DART.[2] Other increases in firepower result from the greater number of riflemen, machine-guns and mortars. It should be pointed out that the organic antiaircraft capability formerly in the Infantry division has been pooled at corps.

The new organization achieves greater mobility in a number of ways. The first is through leanness in its basic structure. Many encumbering nonessentials have been stripped away. Much equipment and some units have been removed and pooled at higher command levels. The equipment of the new battle group is light and, except for two light tanks and two armored personnel carriers in the reconnaissance platoon, is completely air transportable by medium transport aircraft. Other elements of the division also have improved air transportability.

A major factor in the division's increased ground mobility is the new transportation battalion with two transportation personnel carrier companies and a transportation light truck company. The carrier companies are equipped with the M-59 APC.[3] Each has 57 of these armored vehicles. The two companies have a rated capacity of lifting one of the basic tactical elements of the division, the battle group. These tracked vehicles will permit the battle group to employ Infantry-tank teams to a much greater degree than ever before. The light truck company is provided to haul division cargo, removing this function from the division quartermaster company. The quartermaster trucks will haul only class III supplies (POL). The 28 1200-gallon and five 5000-gallon tank trucks assigned to this unit give it an impressive capacity for this job.

The only significant change that has been made in the tank battalion is the addition of one tank company. This gives the battalion a pentagonal structure of five 17-tank companies which permits one company of tanks to support each of the five battle groups. It also provides considerable flexibility in the employment of Infantry-tank teams. While the strength of the battalion is slightly larger than the current tank battalion, the over-all medium tank strength of the division is somewhat less.

Reconnaissance capabilities of the new division have been expanded by replacing the recon company with a new armored cavalry battalion. This battalion

[2]See "What's New For Infantrymen," January 1957 *Infantry School Quarterly*.
[3]See "Chariot for the Queen," October 1956 *Infantry School Quarterly*.

has television, radar, infrared and photographic equipment, all capable of being utilized from aircraft organic to the division. In addition to its normal reconnaissance functions, this 100% mobile battalion, if reinforced, can become an armored task force or perform other combat missions as an economy force unit.

There are several changes in the engineer combat battalion. The number of platoons in the engineer combat company has been reduced from three to two and an additional company has been added to give the battalion a pentagonal organization. The medical detachment is now a section of the headquarters, headquarters and service company. These changes have reduced the over-all strength of the battalion by 52 men. While the pioneer and ammunition platoon of the present Infantry battalion no longer exists, each of the new battle groups has an organic platoon of combat engineers.

In keeping with the criteria laid down for the division and to meet the requirements of the new organization for better communications, signal support has been increased. The division signal company has been replaced by a signal battalion. This is a new organization. It is entirely different from anything seen in the division heretofore. The battalion contains three companies: a headquarters, headquarters and service company, a command operations company and a combat operations company. The command operations company provides the communications required by division headquarters, brigade headquarters, division trains headquarters and the division administration center. The combat operations company, with five battle group area support platoons, installs and operates five forward signal centers to furnish communications for all units in the division forward area. With more men and more and better equipment, the communications capabilities of the division match its increased firepower and mobility.

**This article was prepared through the combined efforts of Lt Col Grat B. Hankins and Capt Joseph H. Rapp, Staff Department, and Capt Lorin P. Chapman, Training Literature Editing Section, Editorial and Pictorial Office, United States Army Infantry School.**

The most important development in the new division artillery was discussed earlier — the adding of an atomic capability. However, in addition to the Honest John battery, the composite general support battalion has two batteries of 155mm howitzers and an 8-inch howitzer battery. Also included in the division artillery is a 105mm howitzer battalion with five firing batteries. Manpower of the new DivArty is about half that of the present artillery but potential firepower is considerably greater.

A combat aviation company has been included in the division trains. The 50 fixed- and rotary-wing aircraft in the new division (about twice as many as in the current Infantry division) are brought together in this unit. The aircraft are organized into two platoons: a direct support platoon and a general support platoon. The direct support unit has five combat support flights, an artillery flight and a target acquisition section. The general support unit has three sections: command support, tactical support and utility. The aircraft of this new company perform a multitude of missions: observation, reconnaissance, artillery adjustment, aerial photography, aerial illumination, aeromedical evacuation, wire laying, etc. They also have the mission of moving troops, supplies and equipment within the combat zone.

There are only minor changes in the medical battalion. A neuropsychiatric section has been added and the number of dentists has been reduced to three for the entire division. Only emergency dental care will be given at this level.

There is no longer a military police company or a replacement company. The military police unit of the division is now a detachment in the division headquarters company. Replacements are handled by a section in the administrative services company.

Some of the most important changes in the new pentagonal organization occur in the division's primary fighting element—the Infantry battle group. It is here that increases in foxhole strength have been achieved while at the same time the size has been reduced. This accomplishment gives the division a smaller self-sufficient combat unit (somewhat larger than the battalion but smaller than the present regiment) which is a less lucrative target on the atomic battlefield than the regiment it replaces. The strength of the new battle group is only 1427 men; yet there are 453 more men in rifle squads in the new Infantry division than there are in the current Infantry division. Some of the factors which contribute to the reduction in the former regiment's size are: elimination of the tank company and the battalion headquarters company, reduction of the medical company to a platoon, combining of the headquarters company and service company into one unit, etc. The increase in riflemen is obtained by adding a fourth rifle platoon to each of the rifle companies and by increasing the rifle squad from nine men to 11 men.[4] The weapons squads of the rifle platoons also have 11 men.

Indirect fire support for the new battle group comes from the mortar battery which is an Artillery, not an Infantry, unit. Initially this battery will be equipped with 4.2-inch mortars but these will be replaced with the new 105mm mortars when they become available.

Other support elements habitually required by the regiment are provided by the headquarters, headquarters and service company. This new unit has a battle group headquarters section, personnel section, counterfire squad, reconnaissance platoon, engineer platoon, medical platoon, supply and maintenance platoon, assault gun platoon and communications platoon. The reconnaissance platoon is composed of Armor personnel and is organized along Armor lines. It has jeeps, light tanks and armored personnel carriers.

Aside from the addition of the fourth rifle platoon, the big difference in the rifle company is in the weapons platoon. This unit now has two antitank squads equipped with jeep-mounted 106mm rifles and three 81mm mortar squads. There are no 60mm mortars or 57mm rifles.

No attempt has been made in this article to discuss every unit of the new division. To understand all of the specific changes in personnel and equipment will require detailed study of the TOEs.[5] Attention here has been confined to some of those areas in which there have been significant or interesting changes.

This new Infantry division is an atomic-age unit designed to fight and survive on the modern battlefield. It has been brought into existence by the onslaught of new capabilities. If not satisfactorily answered here, it is believed that the future and more experience with this new organization will answer the question, "Why five?"

[4]For additional information on the 11-man squad see "Those Who See the Whites of Their Eyes" by Maj Gen A. D. Mead, July 1956 *Infantry School Quarterly.*

[5]Tentative TOEs have been prepared, but these will be available in limited quantities only to units as they are to be reorganized. Finalized TOEs are not expected until early in 1958.

# Take a close look at yourself

Perhaps self-examination will reveal gaps in your professional knowledge. You can plug those gaps with Army Extension Courses. Use these free, study-at-home courses to keep current on tactics and techniques in this period of many changes and new developments. They will help prepare you for more-responsible assignments and promotion.

**WRITE: COMMANDANT, U. S. ARMY INFANTRY SCHOOL, FT BENNING, GEORGIA, ATTENTION: DEPUTY DIRECTOR FOR EXTENSION COURSES.**

an exchange of ideas on Infantry

# Training Ability Money

***The ideas expressed in this exchange of letters between 1st Lt David E. Reeves, USAR, and Maj Gen Herbert B. Powell, Commandant, United States Army Infantry School, provide considerable food for thought. They also emphasize areas in which all Infantrymen—Regulars, National Guardsmen and Reservists—can help to improve the Infantry. Of special importance is the job we can and must do to keep the American public informed of the undiminished requirements for and of the Infantry.—Editor.***

142 Crothers Hall
Stanford University
Stanford, California

Major General Herbert B. Powell,
Commandant, The Infantry School
Fort Benning, Georgia

Dear General Powell:

The October 1956 *Infantry School Quarterly* contains a short note by you. Your last paragraph invites ideas concerning the Infantry. As a Distinguished Military Graduate who served his obligated tour of duty in the Infantry, and then decided to get out, I feel qualified

to answer your invitation. I have given the problems of the Infantry great thought and shall pass my "words of wisdom" on to you.

As I see it, the Infantry today has three severe limitations. I call these limitations "T-A-M"—TRAINING, ABILITY, MONEY. The solution of "T-A-M" and more officers with your willingness to look at ideas would possibly have retained me and other capable officers in the Infantry.

TRAINING: *The problem* is one of realism and sincere desire to have the best trained Infantry in the world. At Fort Ord, I repeatedly had the feeling that our goal was not to train Infantrymen; rather our goal was to keep the mothers on the home front happy with the manner in which we treated their boys. The officers had long since given up the fight to say to hell with the mothers, let's keep the men from getting killed in combat. A feeling of "Don't fight the system — you will just get a low efficiency report" usually prevailed. *The solution:* General officers in your position get up on your two feet and demand good training. This is your Infantry. A firm policy is appreciated, even by the mothers. They will understand. The officers junior to you cannot help but pick up your enthusiasm for good Infantry training.

ABILITY: *The problem* of natural ability for Infantry-type tasks is often joked about, but it is a real problem. Officers like me with a permanent "C" profile (a 3 in the physical capacity position) do not belong in the Infantry if we are doing desk jobs. My profile restricts me to office work, yet I am still an Infantryman according to Department of the Army (despite many requests for a branch change). Officers who do not come up to the high standards required

for the Infantry should be placed in "Branch General" or some other pool of not-up-to-snuff officers. *The solution:* Get officers and enlisted men out of the Infantry who obviously do not belong there. Get officers and EM from other branches who are qualified into the Infantry. To carry this out, a body higher than the present branches at the Pentagon is needed. This body should be able to overrule the branches on their retention or acceptance of a man. At Fort Ord I had a professional football player for a clerk — this man belonged in the Infantry. There is no excuse for this sort of thing.

MONEY: *The problem:* Give the Infantry the same break dollarwise as other services are given. To make a living wage I was forced to get out of the Army or go up into the air. I chose the former as I believe in the Infantry. Equipmentwise, who is at the end of the line?—the Infantry, of course. The Air Force goes to Washington, lobbies, and gets the necessary money for expensive aircraft. The Infantry seems happy to take the scraps left over from Congress. The Infantryman should *never* want for transportation; but you just try to round up enough 2½-ton trucks to move even a company! The Infantry is just getting around to obtaining enough new and much-needed field telephones. It will probably be the year 2000 before we get a new rifle lighter than the M-1 (greatly needed), a BAR that weighs considerably less than 20 pounds, and a new 30-caliber machinegun that doesn't have continual stoppages! *The solution:* Put an extra shirt in your VIP case and go to Congress for a week next time money is discussed. Explain the position of the Infantryman so vividly that we cannot help but get what we need. Take a BAR with you, give it to a senator and ask him how he would like to carry it around all day long. You will get your new weapon!

In short, General Powell, we will have a strong, efficient Infantry when, and only when, you, me and all the other officers in the Infantry realize that what we want is this. The Air Force has been fighting for thirty years for that in which they believe. It is time we did some fighting. If I did not believe this, I would not be taking valuable time away from my study of law to write you. The fight is worthwhile. Let's start now, General Powell.

Sincerely yours,
DAVID E. REEVES
1st Lt Infantry
USAR 04027637

* * *

Headquarters
U.S. Army Infantry School
Fort Benning, Georgia

1st Lt David E. Reeves
142 Crothers Hall
Stanford University
Stanford, California

Dear Lt Reeves:

Since my interim reply to your recent letter I have given considerable thought to your remarks. I shall comment on each of the three "severe limitations" faced by the Infantry in the same sequence as you presented them.

TRAINING: While I frequently find deficiencies in individual periods or phases of our training, these are usually instructor or local faults and not weaknesses in our training programs. Anyone who conducts or observes the training of troops will always find room for improvement. This is as it should be. But I am confident our training today is better than it has ever been in peacetime in our military history.

We learned much about the training of Infantrymen for combat during World War II and more recently during the Korean conflict. Our instruction has been constantly improved and toughened since 1950. Today, much of our training is being conducted in the field and at night — in some overseas areas as much as 40 to 60 percent of it. Our newly commissioned officers are required to complete either the airborne or ranger courses and rugged ranger type training is being incorporated into the instruction of all our Infantry units. Physical conditioning is being stressed. I am sure I have support from both our own Army and the Allied forces we have been helping to train around the globe when I say that, over-all, our Infantry training today *is* the best in the world.

We have no reason for complacency. We must strive continuously to raise our standards. That is why I welcome suggestions from any source that can help us to do a better job.

I agree with you that realism is one of our big problems. We particularly seek ways of making improvements in this area. It is very difficult to duplicate the conditions of actual combat without disregarding the value which we in this country put on the life of the individual. It is true that some, perhaps many, lives could be saved in combat by accepting higher casualties during our training. But we cannot ignore the will of the American people to whom the Army is responsible, including mothers on the home front, who prefer that their sons live to reach the battlefield. To do so would destroy the very principles for which we fight.

Like you, I do not believe that Americans want a soft Infantry. So long as we are scrupulously fair in the treatment of our men, look out for their welfare, avoid carelessness and recklessness, and value human life, we can be tough in our training for combat. In fact, that is exactly what we are doing. Throughout history the American Infantryman has always given a good account of himself. The men we are training today will do the same.

ABILITY: The problem of getting the right man in the right slot is one that is as old as the Army itself. Probably more surveys and studies by experts at every level of our defense structure have been made in personnel than in any other field. Honest efforts have been made to provide for the best possible distribution of military manpower.

We in the Infantry have always sought —and continue to seek—rugged young men with stamina and determination. We naturally desire an elite corps of the best men available. However, we must admit that some of the other services and combat arms (for example, Combat Engineers, Armor, etc.) need the same type of men. The hard cold fact is there is not enough of this select type to go around. The Infantry is the largest single user of manpower in our Army. Even if we got all of the best men available we would still have some who would not completely measure up to our desires.

Our personnel problems are indeed complex. In addition to having brawn and stamina, the men we need must have intelligence and they must have, or be capable of being trained in, highly technical skills. There are many slots where the physical requirement usually associated with the Infantry is not as important as other capabilities. Experience on the battlefield reveals that the most unlikely looking individual frequently proves to be the outstanding leader or the most effective combat soldier — far exceeding men, who, on the basis of physique and statistics, might have been handpicked for the Infantry. Also, to be absolutely realistic, there are some assignments in the Infantry where we can

I have had this exchange of letters published because I feel they may stimulate and encourage constructive activities which could benefit the Infantry and our defense efforts. There is much we Infantrymen can do—in the active Army, the National Guard and the Reserve—to maintain high standards and to acquaint the American public with the increasing importance of the Army and the Infantry in *down to earth defense* of our country.

Maj Gen Herbert B. Powell

use personnel with less than the highest physical profile.

The problem, I believe, boils down to close personal attention at *every* echelon in the Infantry to insure proper utilization of our manpower. We must see that every man is properly assigned. To do this we must know our men and their capabilities. We must seek out all isolated individual instances of misassignment or improper utilization and rectify such errors. We must develop our men physically and mentally to meet our standards and we must weed out those who cannot measure up. And, of course, at the highest level, we must always fight for our fair share of the best men available. I have always endeavored to follow these procedures personally and have insisted that they be followed throughout my command. We stress them in our instruction to all officers attending the United States Army Infantry School.

MONEY: Believe me, I am willing to pack my brief case and do as you suggest. During assignments in Washington I have gone many times before the Congress to plead the Infantryman's case, but my experience does not permit me to share your belief that this, *per se,* gets the new weapons we need. The impact that I as an individual—or any individual for that matter—can make in directly influencing appropriations for the Army and the Infantry is limited. The money and support we need will be forthcoming, when, and only when, the American people are convinced of our need and demand that our requirements be met.

I am not passing the buck when I say this. Nor do I mean to imply that there is little I can do. There is much I can do and am doing.

It is apparent that the American people and their representatives in the Congress have been sold on strategic airpower. But this job of selling was not accomplished by any one individual and it was not accomplished overnight. It is a job that has been worked at intelligently and actively over a period of years by many people. It has been a combined effort by *all* proponents of airpower, military and civilian, including

those who develop and produce aircraft. They have been most successful.

We in the Army and the Infantry must do a similar job. In fact, we have a serious responsibility to do so, not merely in our own interest, but in the interest of a sound, balanced defense force capable of winning "brush fire" wars or general war — with or without atomics.

The American public seems to have bought the idea of an easy "push button" defense for our country with planes, missiles and nuclear weapons. We all know there is great danger in this idea. We can see the catastrophe that could happen if our people are misled or oversold in one direction and fail to provide a proper balance of land, sea and air forces. Even in this atomic age, the absolute weapon is still man — with his feet on the ground and with the mobility and equipment needed to apply the proper amount of force at the right place. Without such a selective force how would we cope with the situation if an enemy should take over a small friendly area or possibly the Panama Canal? Would we destroy our friends or the canal with a nuclear weapon in order to oust the foe?

We must sell our requirements and those of the Army by using all possible media and means. We must work at it day and night.

Here, at the United States Army Infantry Center, our target is not so much the legislator as the people in our neighboring communities and those with whom we come into daily contact both collectively and as individuals. I can assure you that I personally make our needs known at every opportunity and I seek out opportunities. By demonstration and expression we sell Infantry to all civilians who visit this Center including those who attend our Joint Civilian Orientation Conferences. In our *Infantry* magazine, on our radio programs and in all of our public relations activities we sell the historic and continuing importance of the Infantry in our national defense. We go before civic organizations and other community groups. We appeal to all students who come to the United States Army Infantry School from our reserve components for help in their home communities. Increasingly, in everything we do and say, we seek to convince the public of our requirements.

There is much that you and your friends can do to help. You are familiar with the Infantry — you know its value and its problems and you have daily contact with many people in your community. We need your assistance.

It will take time and hard work by all of us to keep the American people fully informed but if we work at it constantly and energetically we will get results. I have great faith in the judgment of the American people once they have the facts. When they are shown and understand what is needed, we will get the appropriations and support we require.

I found your thoughts on our limitations stimulating and hope that my comments may be of some value to you. The facts that you are still following our activities through *Infantry* and that you would take time from your law studies to write are sincerely appreciated.

If we can ever be of assistance to you please let us know.

Sincerely yours,

HERBERT B. POWELL
Major General, U.S. Army
Commandant

# HELICOPTERBORNE OPERATIONS

By Capt Joseph O. Wintersteen, Jr.

There can be no doubts about the Infantry's need today for increased mobility on the battlefield. To exploit fully the tremendous firepower of nuclear weapons and at the same time to minimize the effectiveness of similar enemy firepower we must be able to move. We must be able to do it quickly and over considerable distances.

Outstanding among the means available to provide this sort of battlefield mobility particularly for small units is the helicopter. In an article, "Wings for Infantry" (July 1956 *Infantry School Quarterly*), the importance of the helicopter to the Infantry was discussed by Col John J. Tolson, who was then director of the United States Army Infan-

try School's Airborne-Army Aviation Department (now the Airborne-Air Mobility Department). This article also covered the types and quantities of rotary-wing aircraft that are now available or being procured by the Army, how they are organized and where they are located.

With the helicopter very definitely a part of the Army's plans for increased mobility and flexibility in any future war, we in the Infantry must know how to use it in our combat operations. Every Infantry commander down to and including the platoon leader should be able to plan for and utilize this type of aircraft to move his unit into an objective area for ground combat.

If you were suddenly given the task of incorporating helicopters into a combat situation or a training exercise could you do it? Would you know where to start? If not some of the following information may be helpful.

One of the important things for any commander to know is where to turn for the information he will need when he is called on to use helicopters in a tactical

**Infantry commanders down to and including platoon leaders must know how to plan for and employ helicopters in combat.**

situation. Much of the needed information can be found in The Infantry School Special Text 57-35-2, Army Transport Aviation Combat Operations, and TM 57-210, Air Movement of Troops and Equipment, a revision of which is being worked on and should soon be available. Additional information can be obtained by contacting the helicopter unit furnishing the aircraft and requesting a liaison officer who will maintain close coordination throughout the planning and execution of the operation. The liaison officer will be indispensable to furnish information on the number of aircraft available, the status of training of the helicopter unit and other current data and guidance.

Planning for a helicopter operation is very similar to the planning for a parachute operation. The usual type of operation is one in which there will be an early linkup with other forces such as a situation in which the helicopterborne force is used to seize critical terrain within enemy territory along the planned route of a main ground effort. Such an operation is designed not only to assist the forward progress of the ground attack but also to disrupt the enemy's line of communications.

It is necessary to analyze carefully the mission and to study the terrain and enemy situation before undertaking the planning required for a helicopterborne operation. This planning is actually a series of plans: plan of maneuver, landing plan, air movement plan, fire support plan, linkup plan and loading plan.

## Plan of Maneuver

The plan of maneuver is developed to accomplish the mission of seizing that terrain which will prevent enemy reinforcement, thus assisting the main ground attack. At battalion level, company objectives are selected within the area designated by the regimental commander.[1] The considerations in selecting these objectives are the same as in any other operation except that in this type of operation the proposed defense of the area must also be considered. In enemy territory the perimeter defense is required in order to defend in all directions simultaneously. The proposed defense is outlined by an airhead line of generally circular shape which includes the objectives. The size of the airhead should provide room for maneuver and adequate depth for the defense. The airhead line includes all of the terrain which the commander plans to seize from and deny to the enemy.

The security echelon is outside the airhead line and consists of roadblocks, outposts and observation posts so placed as to prevent enemy ground reconnaissance and close observation of the airhead. This line (reconnaissance & security line) provides early warning of any enemy advance, delays enemy advance and deceives the enemy as to the location of the friendly forces within the airhead, by being organized completely around the airhead and on those terrain features forward of the airhead line. This line should be within supporting distance of the weapons within the airhead, i.e., mortars should be able to support these positions.

After the objectives and airhead line have been selected, sectors of responsibility are assigned to units by designating boundaries. In selecting boundaries, care must be taken not to split the responsibility for a major avenue of enemy approach. Also, if at all possible, a unit, upon landing, should not be required to attack in divergent directions simultaneously. Whenever feasible, sectors should remain the same in the defensive phase as they were in the assault so that

[1]Some modification will be required for the new Infantry division since there are no battalions and since companies are under direct control of the battle group commander.

only a minimum change of troop dispositions will be necessary.

During the assault to seize objectives, greater distances between units may develop as they simultaneously conduct individual attacks to accomplish their missions. Centralized control is difficult to maintain. Decentralization is achieved by the attachment of supporting elements to each unit as needed, so that commanders are not unnecessarily restricted in accomplishing their respective missions.

A reserve is provided in the airhead from one of the assault units. Because of the many assault tasks to be performed, it is characteristic for the reserve in this type of operation to be small. Seldom will the reserve for a battalion be more than one rifle platoon. This reserve is taken from the rifle unit having the least critical assault mission. During the defensive phase, the reserve normally is placed in a prepared position in depth. When needed during the conduct of the defense, troops in a sector not engaged with the enemy may be withdrawn from their position on the airhead line to be employed in another sector which is under heavy enemy pressure.

## Landing Plan

The second major consideration in this type of operation is the development of the landing plan: The landing plan is based on the plan of maneuver. It indicates the sequence, time, and place of arrival of troops in the airhead and the control measures to be used. If adequate landing zones are available, (on average terrain they normally can be found) it is desirable to move and land assault elements simultaneously. This not only enhances control and facilitates the ground plan of maneuver but, also, achieves maximum speed and surprise.

The commander and staff of helicopter units are relied upon to furnish technical advice as to the suitability of landing areas within the objective area.

Landing sites (areas within a landing zone where one or more helicopters can land and take off) are selected in preference to the use of one large area for all aircraft. Chosen to implement the tactical plan, landing sites permit the aircraft to land directly on or adjacent to ob-

**Helicopterborne troops leave the aircraft quickly, get into action fast.**

jectives. This reduces the time required for assembly and reorganization after landing. Only time for the orientation of leaders is necessary. Maximum surprise and speed are gained by landing the helicopters at various sites to allow simultaneous seizure of objectives. This may not be possible in night operations. In such cases, landing may be made some distance from the objective areas to permit reorganization and regrouping of the forces, thus attaining a higher degree of control and a coordinated attack.

Under certain conditions of weather and terrain, or at night, it is imperative to employ Pathfinders in the objective area. However, Pathfinders will not be discussed here in detail as this would require a lengthy presentation. It is sufficient to point out that they are personnel specially trained in the terminal guidance of aircraft and in aerial delivery. It also must be mentioned that their entry into an objective area prior to the arrival of assaulting troops could possibly compromise the operation. While deceptive measures may be employed to maintain secrecy the commander of the helicopter-borne operation must weigh the advantages and disadvantages of employing Pathfinders when developing his tactical plan.

## Air Movement Plan

The amount of detailed planning required for air movement will depend upon the size of the force and the scope of the operation. The plan is developed by the ground unit commander assisted by the helicopter liaison officer. It prescribes the approach and return routes, the formation, altitude, speed and means of flight control. Air control points (ACPs) which will assist in keeping the flight oriented are selected at easily identified points along the route. The first and last points are designated as the initial point (IP) and release point (RP) respectively.

In working out the details of the plan a route must be selected for the helicopters to follow to and from the objective area. When studying terrain, maps or photos, numerous possible routes may seem feasible. To determine the best route several factors are considered. The first of these is the ability of the enemy to detect our movement. Enemy detection can best be avoided by flying at low altitudes and by taking advantage of defilade and concealment in flight. Fog or mist may be an aid or smoke screens may be laid to reduce the enemy's ability to

**After crossing the release point the aircraft go directly to landing sites within designated landing zones.**

detect the movement. The longer it takes the helicopters to pass a given point, the greater is the possibility of their being detected by the enemy. A shuttle movement, or an extremely large formation, may be very vulnerable to enemy detection.

Another factor to be considered in route selection is the location of enemy forces. Obviously, it is unwise to fly over or near enemy antiaircraft weapons and troop concentrations. Intelligence agencies must be relied upon to furnish this information so the enemy can be avoided or neutralized.

A third consideration is the capability of supporting weapons to suppress enemy fire against the helicopter movement. In addition to the usual considerations of supporting artillery and close air support guided missiles must now be recognized and incorporated into fire support planning to assist air movement. Every available supporting weapon should be used to reduce or destroy the enemy's ability to interfere with the movement.

Still another factor, closely allied to the one just discussed, is the extent of the restriction on friendly fire support created by the air movement. Supporting fires must be controlled to keep them from inflicting damage on the aircraft. At the same time there must not be unnecessary interference with fires which will support either the air movement or the main ground effort.

One other important consideration is the ease of navigation over unfamiliar terrain. The easier it is for pilots to identify passing terrain and to follow the planned route the more likely will the air-landed force reach its destination on time and in the formation prescribed.

Multiple routes may be used to reduce the length of time required for the transported force to pass over enemy territory. This will increase the enemy's difficulties in concentrating fires against our aircraft. But the problems of flight control, navigation and coordination of friendly fires will be increased.

**Pathfinders mark landing sites.**

After selecting a route, air movement planning continues by assigning unit positions within the aircraft column based upon priority of their mission in the objective area. The actual formation (echelon, vees or trail) is based upon both technical and tactical considerations.

**Fire support "escorts" the helicopter formation to and from the objective area.**

Tactically, it must tie in with the landing plan in the objective area and must be considered from the standpoint of protection from enemy detection and fires, and coordination with friendly fires. Technically, the type of helicopter provided, its capabilities and the effects of weather and terrain on its performance must be taken into account.

The altitude that the formation should use requires the weighing of two conflicting considerations: necessary height to avoid small-arms fire from enemy troops, and the lowest possible altitude for protection from long-range detection and antiaircraft fire. Low contour-flying helicopters appear to offer the best chance of obtaining local surprise and passing beyond enemy troops and antiaircraft weapons before they can react with effective fire. The speed planned should be the fastest possible, compatible with the altitude considerations.

## Fire Support Plan

The problem of fire support has been mentioned in the plans just discussed. Now attention must be given to details of the fire support plan.

Fire support planning must take into consideration the provision of fires to assist the air movement of the aircraft to the objective area. If the depth of the operation is beyond that of the range of the direct support artillery battalion, longer range artillery support may be needed.

The planning (assisted by the Fire Support Coordinator) must insure that, starting from the line of contact, fires will "escort" the aircraft formation as it moves all the way to and from the airhead. As necessary, assistance at successively greater ranges is planned by use of very heavy artillery, close air support and missiles.

All artillery and supporting fires in support of the air movement are coordinated by prescribing a flight corridor astride the planned flight route. This also provides the aircraft with a limited measure of freedom of maneuver therein. Any fires to be placed within the limits of the corridor must be coordinated through the FDC of the direct support artillery battalion. It should be pointed out that premature or unusual firing may alert the enemy and give away the operation. This possibility must be con-

sidered and weighed and deceptive measures taken to maintain secrecy.

Once the battalion has landed within the objective area, fire support will be provided from two sources, within the airhead and from outside the airhead. The fires originating from within the airhead present no particular problem but some means must be used to coordinate the fires delivered near or in support of the airhead but which originate from artillery or supporting units located within other friendly areas. All of the outside fires can be coordinated by placing a no-fire line completely around the airhead position which in turn requires that all supporting fires be coordinated through the FDC of the direct support artillery battalion of the helicopterborne unit.

By the use of the measures described above artillery fires can be coordinated from the line of contact to and including the airhead. All of these fires will be coordinated through one agency, the FDC of the direct support artillery battalion. These measures should be considered in light of the coordination and support they provide rather than in terms of a burdensome restriction.

Army aviation plays another role in fire support planning. An aerial observer may prove of invaluable assistance in keeping the helicopter column correctly oriented in flight, and in adjusting supporting fires.

## Linkup Plan

This plan includes all measures taken to facilitate the meeting of advancing friendly forces with the unit in the airhead.

The major items to be considered in the linkup plan are: the assumption of command, command and staff liaison, a system of mutual recognition, coordination of communication, fire and maneuver plans and any action not covered above that can be accomplished by the forces within the airhead to assist advancing friendly ground forces.

Assumption of command refers to a change in command relationship upon linkup between the helicopterborne unit and the next higher headquarters. If the unit is a battalion, operating under division control, it may revert to regimental control after linkup. Such a change in command then must be specifically outlined as to the manner in which it will be accomplished. No assumption-of-command problem exists if, for example, a regiment employs a battalion in a helicopterborne operation to assist the regiment's attack and then links up with that battalion.

Equally important in linkup planning is the establishing of liaison between the two concerned headquarters. This liaison is most effective if an officer of one headquarters is always present and available at the other headquarters. The early exchange of experienced officers will facilitate all planning phases as well as the linkup planning. The liaison officers should be equipped with radios that are in contact with their parent headquarters thus providing a direct channel of communication at all times during the planning and execution of the operation.

Information as to communications should be exchanged between both friendly forces. Radio frequencies and call signs are obviously of importance and, if necessary, complete radio sets may be exchanged.

A system of mutual recognition, such as pyrotechnic signals, panels, vehicle markings and identifying arm bands are practical solutions which help to prevent needless fire fights and casualties between friendly forces.

Each headquarters must be familiar with the tactical plan of the other unit.

The two forces should agree upon points of meeting (linkup points) to assist the juncture of the two fighting forces. These linkup points may be located on the R&S line where contact is expected.

The coordination of fire plans is of particular significance to the linkup. Each force should be informed of the other's fire control procedures, such as location of the bomb lines and no-fire line and be continually apprised of changes in these lines during the conduct of the operations.

Any action which will assist the linkup should be accomplished by the airhead forces. Since the airhead force is controlling a vital piece of terrain prior to linkup, it may have information which will assist the combined effort of the two forces in subsequent operations. Obstacles intended to impede the enemy along the expected avenues of approach should be rapidly removed by the airhead forces as linkup becomes imminent.

**Helicopters come to the transported unit.**

## Loading Plan

The loading plan will include the administrative details which are to be accomplished prior to beginning the air movement to the objective area. The exact sites at which troops will load on the aircraft are selected. Troop and aircraft control measures are planned. While at the loading area, which may be the unit rear assembly area, the troops are organized into plane groups bearing in mind the following principles: maintain small unit integrity whenever possible, i.e. rifle squads; divide commmand personnel among several aircraft so that the loss of one aircraft will not wipe out the command group of a unit; divide crew-served weapons among aircraft, so all mortars, for example, will not be lost through the loss of any single aircraft.

Prior to enplaning, final checks are made of the manifests (forms upon which personnel and equipment have been listed as the specific cargo or load for each aircraft). The issue of ammunition and rations is also checked and other last minute details are taken care of.

An important factor in helicopter loading is the ability of this aircraft to go directly to the ground unit assembly area. This differs from past airborne operations wherein troops must go to the aircraft — usually at a prepared airfield.

To accomplish the over-all planning for the helicopterborne operation, much of which is accomplished simultaneously, the S3 of the unit will require the full cooperation of many staff officers: the Fire Support Coordinator, the S2, and the helicopter liaison officer, to mention only a few of those who are principally concerned in the planning.

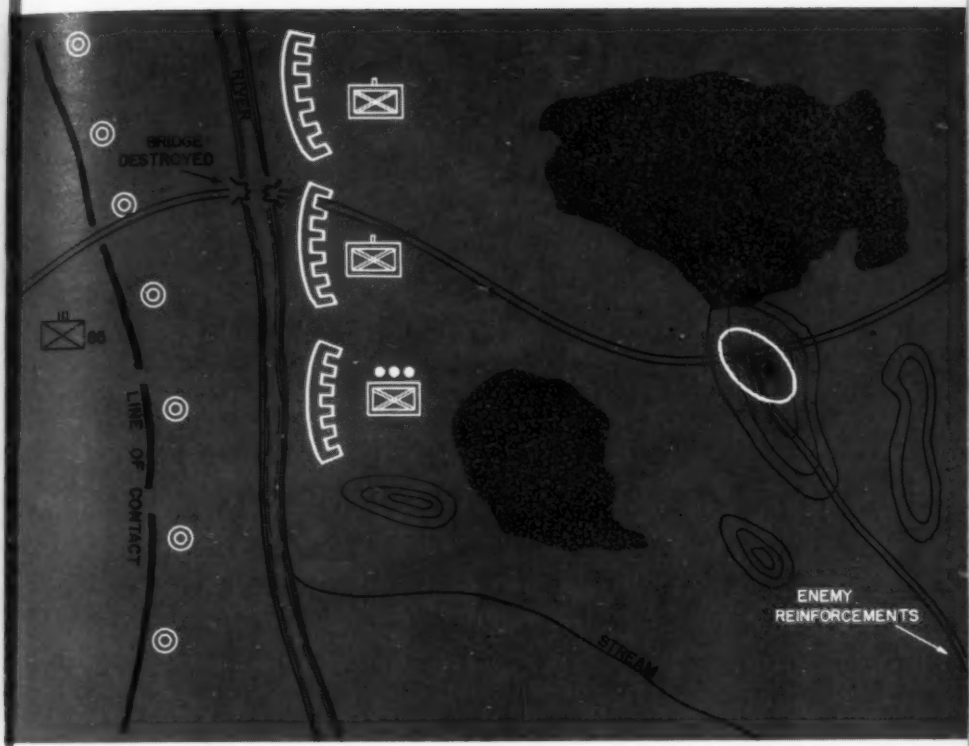



**Figure 1. Schematic situation map.**

## Sample Operation

Now that the basic considerations for planning a helicopterborne operation have been discussed, let's look at a sample operation.

The advance of the 85th Infantry has been opposed by scattered enemy resistance. Intelligence reports indicate that the enemy position presently opposing the regiment is only lightly held. However, the bridges which give access to this position have been destroyed. The regimental commander decides to send a helicopterborne battalion to block the enemy routes of reinforcement to the positions on the opposite river bank. The planned objective area for the helicopterborne force is not occupied by the enemy. The regiment minus will make a river crossing while the helicopterborne battalion prevents enemy reinforcements from reaching the river crossing site. The regiment minus will link up with the helicopterborne battalion by H+4 hours (Figure 1).

Acting as Bn S3, we will develop the tactical plan for this helicopterborne battalion.

Since our unit has never before worked with helicopters, there is much information that we do not know; i.e., lift capability of the helicopter, how much space is required for landing, etc.

First, we contact the helicopter unit

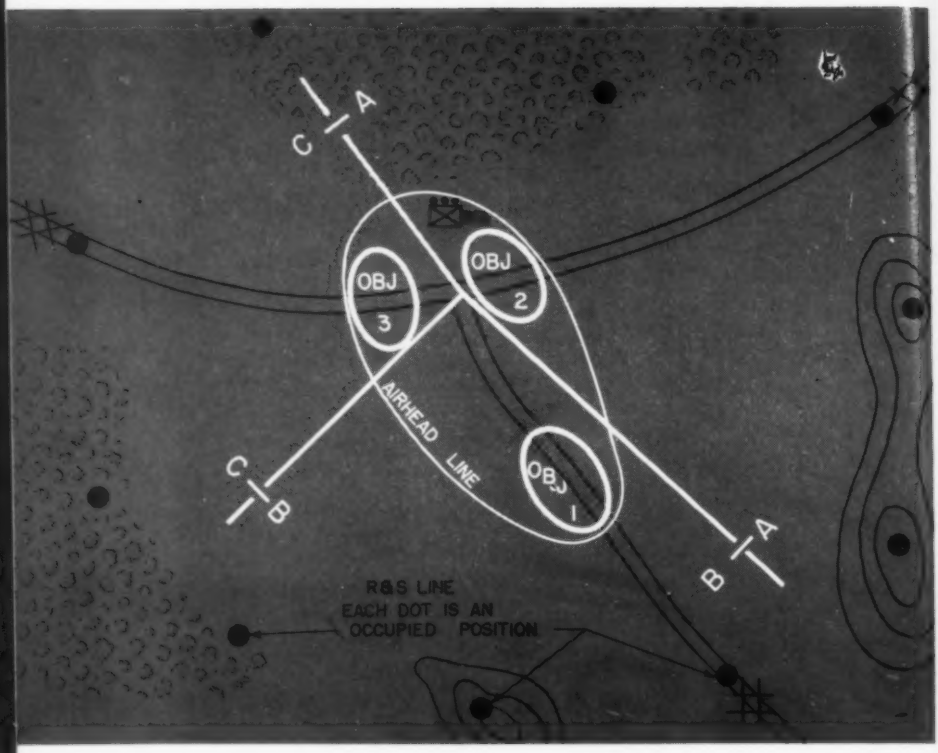



**Figure 2. Maneuver plan.**

to request that a liaison officer be furnished to our headquarters. This will provide us with the technical assistance we will need during our planning. The liaison officer arrives and tells us that the H-21 helicopter which is organic to his unit will carry 16 combat-equipped soldiers based upon a short-range mission. He also states that there will be 50 helicopters available for our use. We select our objectives (the most critical terrain) and assign the different companies their missions by drawing boundaries (Figure 2). The airhead line encompasses all of the terrain which we intend to seize from and deny to the enemy. The positions on the R&S line are selected so as to prevent enemy close-in observation of the airhead and to give early warning to the airhead defense in the event of an enemy attack. Since the company boundaries terminate short of the R&S line, this indicates that the responsibility for this line will be battalion's. To man this line the battalion has designated the P&A platoon, the Bn Intelligence Section and the I&R platoon which has been attached to the battalion for this operation. If later required, the R&S forces can be reinforced by rifle company elements.

A section of machineguns and a section of antitank guns are attached to Companies B and C since they face the great-

est enemy threat. Company B is to defend in the direction facing toward known enemy reinforcements while the planned defensive position of Company C is facing toward the possible withdrawal route of the enemy located along the river. The battalion reserve — one rifle platoon — is from Company A since it has the least critical mission.

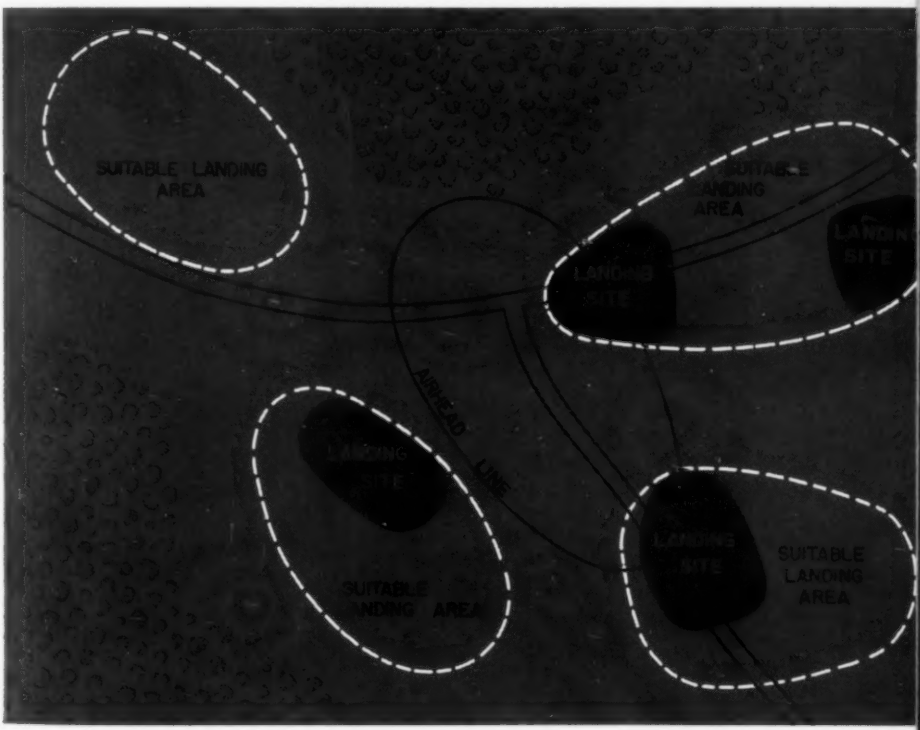
That covers the important considerations in our plan of maneuver and is used as a basis for our landing plan which we will develop next. Our own S2 and the helicopter liaison officer coordinate on selecting landing areas which will accommodate the H-21 helicopter.

The liaison officer tells us that each helicopter needs a 50-yard square of terrain on which to land. This figure allows the helicopter a slight ground roll, if needed. He then studies the available maps and aerial photos and indicates the areas suitable for landing helicopters. (Figure 3.)

When we study the selected landing areas we find that we won't need them all to support our operation. We pick only those areas which are best suited to our tactical plan previously discussed. We plan to land our units on or as close to their objectives as possible. Actual landing sites are the solid areas in Figure 3.

In our air movement plan we decide to fly over an easily identified route and also avoid the strongest enemy positions.

**Figure 3. Landing plan.**



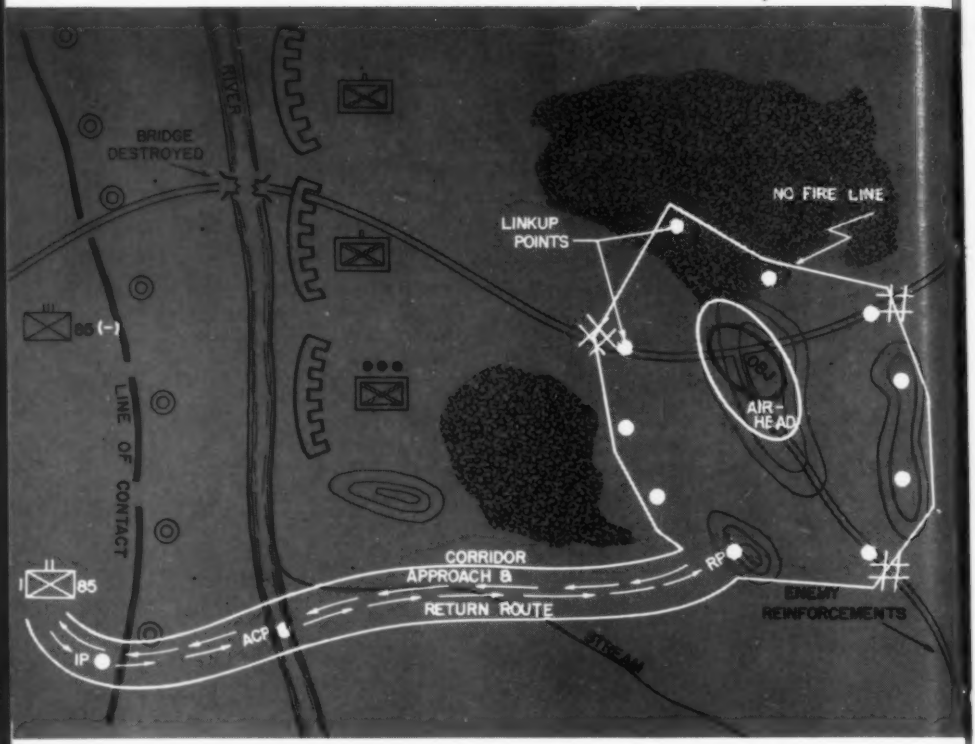



**Figure 4. Air movement and fire support plans. Formation for aircraft: echelon right, three aircraft. Altitude: 25 - 100 feet. Speed: 100 mph.**

The other details of air movement are shown in Figure 4. We have enough helicopters to carry all the assault elements of our battalion in one lift. Within the air column, helicopters are allocated to the companies of the battalion by a priority based upon the missions assigned within the objective area. Our priority is: assault troops, security troops (R&S line), supporting weapons and finally headquarters and support personnel. Meanwhile the fire support coordinator (FSC) has been working on the fire support plan. We have asked that a 1000-yard corridor be placed on the flight route. All fires within this corridor are to be coordinated through our direct support artillery battalion. We plan for artillery fires to be placed on known and suspected enemy positions both along the flight route and in the objective area. An airborne coordinator will be available to direct close support aircraft. The FSC tells us that we will have division artillery support all around our airhead. Therefore we need only take our 81mm mortars with us. If we were not so fortunate and lacked adequate artillery support we would also use 4.2" mortars as a substitute for needed artillery support within the airhead and would request their attachment from regiment. A no-fire line is placed around our R&S line, with all fires to be co-

ordinated through our direct support artillery FDC.

To facilitate linkup with the advancing friendly forces we plan on an exchange of radio frequencies. Arm bands will be worn by all personnel within the airhead as an aid to identification. Linkup points have been agreed upon as shown in Figure 4. All information on fire plans and maneuver plans will be exchanged between our battalion and regiment. An observer will remain aloft in an L-19 aircraft to provide continuous coordination and observation throughout the conduct of the operation.

Now that we have completed our tactical plans for the operation we can turn our attention to the loading plan of our units. We provide for the issuance of ammunition and individual rations to the troops within the assembly area. Aircraft loads are basically developed by attaching a crew-served weapons crew or other personnel such as radio operators, aid men, or forward observers to each rifle squad. Loading sites are selected and the number of aircraft to be loaded at each site is determined. Telephone communication is installed between all loading sites and the loading area control group (at the Battalion CP).

To capitalize on the flexible landing capability of the helicopters, loading sites are selected close to the battalion assembly area, thus requiring minimum displacement of our troops.

The helicopterborne operation as briefly described here is one solution for mobility on the battlefield which will be vital to successful ground operation in future warfare.

We can use Army helicopters as tactical battlefield transport provided we intelligently analyze our tactical mission and over-all situation. The solution lies in combining the helicopter's capabilities, friendly firepower and intelligence of the enemy's strength and dispositions within the planning procedures outlined. We must learn how to do it.

**Capt Joseph O. Wintersteen, Jr., began his military career as an enlisted man with 103d Infantry Division in Europe during World War II. After the war he attended Pennsylvania State College. Upon graduation in 1949 he was commissioned a second lieutenant in the Regular Army and took jump training. He was then assigned to the 511th Airborne Infantry Regiment as a platoon leader. He next served in Korea with the 7th Infantry Division as a company commander, and in the G3 Section. Returning to the States he became a company commander and then a battalion S3 in the 505th Airborne Infantry Regiment. Capt Wintersteen graduated from the Infantry officer advanced course in 1954 and remained at Fort Benning as an instructor on air mobility.**

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*All of the Services are deeply aware of the need for versatility so that we can apply military force appropriately, according to the circumstance. For this reason, the Army will always require so-called conventional weapons in quantity because there will be many situations for which an atomic weapon, even if available, is not the appropriate response. . . . The Army must have weapons which will destroy the sniper in the church steeple without destroying the bishop and the entire diocese.*

General Maxwell D. Taylor

we should know
W. Kalwick

# MORE ABOUT TRAINFIRE I

***Troop tests show that this method of marksmanship training should produce more effective combat riflemen.***

Known-distance rifle marksmanship as we have taught it for more than three decades has not proved to be the best method of producing a combat rifleman. In its place we expect very soon to have the Trainfire I method of basic marksmanship training.

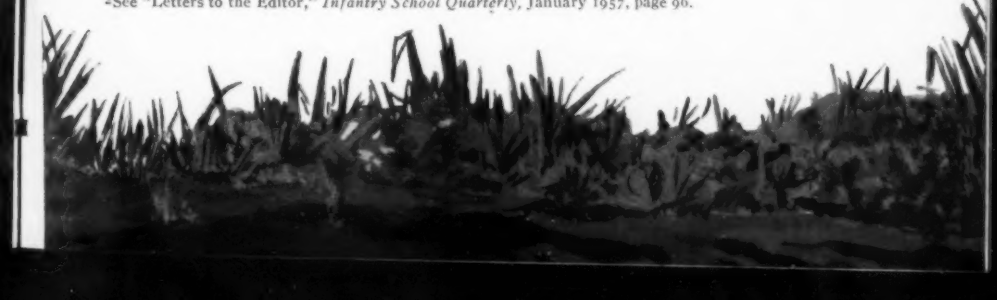
When Trainfire I was first discussed in the *Quarterly*[1] a little over a year ago, it was still in the developmental stage. The training course was not fully developed; the hours required for training, the number of rounds to be fired and other factors were not firm; and the course had yet to be troop tested.

The *Quarterly* article and subsequent information in other publications brought immediate comment from individuals throughout the Army and from other services, including Infantrymen in the Marine Corps.[2] Much of this comment was favorable—some of it was not. Upon analysis it was apparent that many of the criticisms could be attributed to misunderstanding. Many points of the program had not been made clear and others were misleading. For example, the training hours and ammunition allowances mentioned in those articles were minimum requirements used for economy's sake during experimentation. They were not intended to represent final requirements which only experience and further testing could provide. Some objections undoubtedly were the usual reaction to change.

Now, most of the experimentation has been completed and troop tests have been conducted at Fort Carson and Fort Jackson. These tests indicate a definite improvement over present rifle marksmanship instruction and the known-distance range. Convinced of its superiority over our present training, the US Army Infantry School and USCONARC have recommended adoption of Trainfire I. Final approval by Department of the Army is needed to put it into effect.

Before discussing the troop-test results it may be useful to review briefly some of

[1] See "Trainfire," *Infantry School Quarterly*, January 1956.
[2] See "Letters to the Editor," *Infantry School Quarterly*, January 1957, page 96.



the background and basic concepts of Trainfire I. The *Quarterly* published this information in January 1956 but some of it is repeated here to provide a better understanding of Trainfire developments to date.

Trainfire I is the result of detailed studies on the effectiveness of rifle fire during World War II and Korea. These studies, initiated and sponsored by the Department of Defense, determined that our Infantrymen lacked sufficient skill and confidence in the delivery of aimed fire on the battlefield. They further determined that the transfer value[3] of known-distance range training to combat was questionable. To determine the fault, and correct it, a research project was begun early in 1954 with the mission of uncovering means, not necessarily within conventional marksmanship methods, for improving rifle marksmanship training. The job was specifically given to CONARC Human Research Unit Number 3 (now United States Army Infantry Human Research Unit) at Fort Benning, in cooperation with the Weapons Department of the United States Army Infantry School. It was stipulated that this training had to be incorporated generally within the number of hours presently allotted for marksmanship training and had to be well within the capability of a rapid mobilization program. For identification purposes the project was given the name Trainfire I. The research board first determined what combat skills are required of a rifleman in placing effective fire on the enemy. Next, those skills had to be reduced to fundamentals of shooting which training must stress. To do this, careful study of battle reports and other current military literature was necessary as well as extensive interviewing of combat-experienced Infantrymen. Future developments in weapons also had to be considered. The basic principles of the Trainfire I concept of rifle marksmanship training are founded on these and other studies. The principles are not entirely new. Rather, they re-emphasize conventional marksmanship principles and provide a more realistic approach to the problems the rifleman faces on the battlefield. The fundamentals or premises on which combat marksmanship must be based are:

1. Enemy personnel targets are rarely visible except in a close assault.

2. Most combat targets consist of a number of men or objects irregularly lined and using cover such as ground folds, hedges, ditches and borders of woods.

3. These targets, detected by smoke, flash, dust, noise or movement are usually seen only fleetingly.

4. These targets can be engaged by using a nearby object as a reference and aiming point.

5. The range of battle targets will rarely exceed 300 yards.

6. The nature of the target, the terrain on which it appears, and the "digging in" requirement of the defensive often preclude the use of the prone position. These conditions do, however, favor supported positions.

7. Selecting an accurate aiming point in elevation is difficult because of low

Figure 1. Trainfire I training program.

**TRAINING PROGRAM**

| SUBJECT | HOURS |
|---|---|
| Orientation & Operation M-1 Rifle | 2 |
| Mechanical Training | 4 |
| Preparatory Marksmanship (1000-in. range) | 26 |
| Battlesight Zeroing (75-yd. range) | 4 |
| Field Firing | 18 |
| Target Detection | 16 |
| Record Course | 8 |
| Total | 78 |

[3]The ability to learn skills in one situation and use them in another situation.

outline and obscurity of battlefield targets.

8. The problem of proper elevation is complicated by present zeroing instructions—that is, using a six o'clock hold at the bottom of the bull's-eye to achieve a center hit.[4]

9. The conditions of rifle fire in battle rarely require or permit the use of a windage adjustment.

Once the various elements of the problem were determined the objective of Trainfire I became clear: to train the soldier to use his rifle effectively in combat. The course is therefore based on the fundamental principles that the combat rifleman's targets consist of enemy personnel and that his effectiveness as a rifleman depends upon his ability to neutralize individual targets. To achieve effectiveness the rifleman must be skilled in detecting targets, aiming his rifle at the detected targets and firing upon the targets without disarranging his aim.

The present Trainfire I course requires 78 hours of instruction (Figure 1). Two hours are set aside for orientation, four hours for formal mechanical training, 16 hours for target detection, 30 hours for preparatory marksmanship instruction on the 1000-inch and zeroing ranges and 26 hours for field and record firing. Record firing consists of two qualification periods of four hours each.

## Preparatory Training

Trainfire I does not neglect basic shooting principles. Changes have been made only in *emphasis* and *procedure*. For example: The known-distance method of marksmanship training requires the firer to complete 24 hours of preliminary rifle marksmanship instruction (PRI) before going on the range to fire. As shown in Figure 1, the Trainfire I concept requires

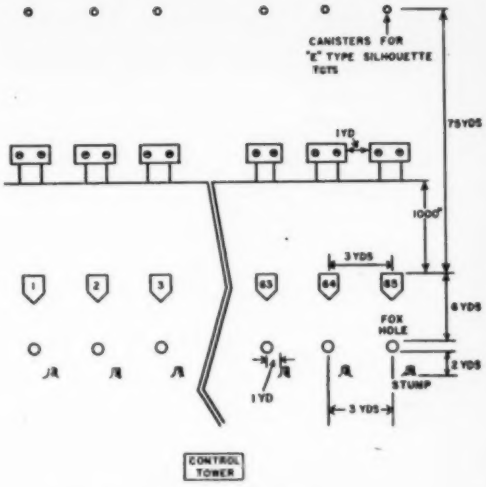



**Figure 2. Trainfire 1000-inch range.**

26 hours of this training, but all of it is done on the 1000-inch range (Figure 2) where both the firer and instructor can more readily determine the results of the firing. At the same time the firer will be motivated by frequent intervals of firing.

In Trainfire I the soldier actually fires at a target during his second period of instruction. The 1000-inch target used in this first firing, and all other subsequent 1000-inch targets, are kept in the trainee's progress envelope to enable instructor and student to find errors and correct them before they become habit. This early firing assists the basic trainee in a number of ways. He is not as likely to become bored or kept in suspense through many hours of preliminary rifle instruction before firing. He gets the chance to fire on a 1000-inch target which may subsequently be compared to others he fires and to those of a trained demonstrator—thus giving the trainee a gauge of his progress and the vivid realization that he has a great deal to learn.

[4]This procedure introduces an error in zeroing which is half the diameter of the bull's-eye. The error is then increased if the soldier is required to aim at center of mass of a field target rather than at its lowest visible edge. Since only part of the actual mass of bulk of the target is usually seen in combat the center of "seen" mass will normally be above the actual center.

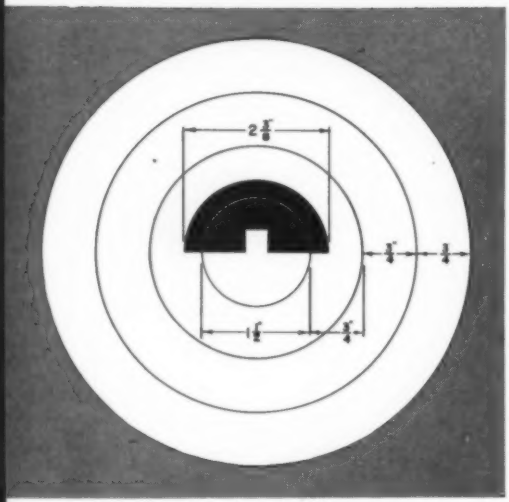



**Figure 3. Half bull's-eye target.**

He learns quickly, especially if he is firing the rifle for the first time, that the weapon will not harm him (this initial firing is preceded by a rifle-will-not-hurt-you demonstration).

Aiming and steady hold are taught as the two most important elements in marksmanship instruction. The trainee learns to focus his eye and mind on the front sight when he fires, thus helping to insure correct alinement. He takes part in an aiming exercise similar to the third sighting-and-aiming exercise described in FM 23-5. During this exercise, and for all preparatory marksmanship training and 1000-inch firing, a half bull's-eye target is used. This target (Figure 3) presents the firer with a clearly defined aiming point and permits him to become accustomed to aiming where he intends the bullet to strike.

Trainfire I teaches the type of trigger control now used in sustained fire rather than the exaggerated trigger squeeze encouraged in slow fire which tends to detract from concentration upon correct aim. The importance of the trigger is not overlooked but observation has shown that present training tends to make the soldier overly conscious of his trigger action during firing. To overcome this fault, Trainfire I stresses shooting as an integrated act consisting of obtaining the correct sight picture and holding the rifle steady while pressing the trigger to the rear. Steady hold consists of eight factors: position of left arm and hand, butt in pocket of shoulder, grip of right hand, position of right elbow, spot weld, breathing, relaxation and, as mentioned, trigger control. The steady-hold factors imply position which, of course, goes hand in hand with good shooting.

As in conventional training, the soldier learns that all features of a good position should contribute to holding the rifle steady so that it may be fired without disturbing the firer's aim. The use of the sling, however, is not taught in Trainfire I because the sling is rarely used in combat except to carry the rifle. Naturally, should the firer eventually graduate to competitive firing he probably would want to learn the use of the sling. The objective of Trainfire I, however, is to teach accurate fire with methods most practical to combat.

To further duplicate the conditions under which he will fire in combat the trainee wears the steel helmet and stripped pack for all Trainfire I firing.

Also in line with the realistic approach of Trainfire I, the supported position is generally used, with about 60% of the firing in the Trainfire I course being done from a supported position. The soldier learns to use such supports as may be available to obtain a more accurate sight picture and, consequently, deliver a more effective shot. The technique of using support for firing consists of resting the hand, wrist or arm on the support, such as a tree, stump, edge of foxhole, wall or rubble, and placing the rifle firmly in the supported palm. The rifle does not rest on the support itself. Since much of

the rifle fire in combat is delivered from supported positions, the high transfer value of this training is readily apparent.

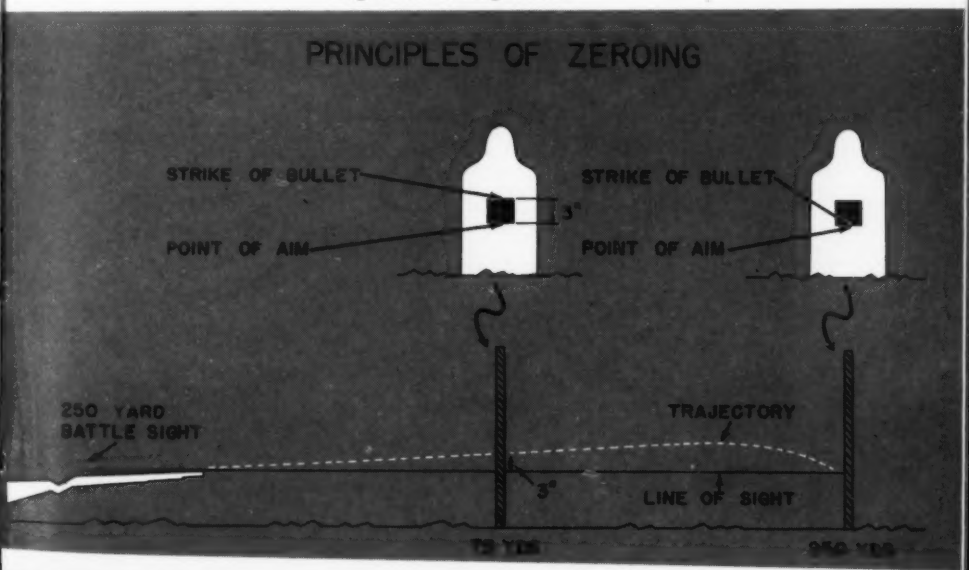
This emphasis on supported positions does not mean that Trainfire I trains the recruit primarily in defensive firing. The trainee learns to use supported positions in the defense and, whenever practicable, in the offense. For instance, if he is advancing and sees a target 50 or 75 yards away he probably would stop, take a well-aimed shot from the shoulder and continue his advance. If he had to engage a target 200 or 300 yards away he might get down quickly into a kneeling or squatting position, fire, and advance.

A corrective platoon provides additional training for the firer who fails to measure up to the standards of the group. He receives instruction to correct his deficiencies and is returned to group training only when the corrective-platoon leader is satisfied that the deficiencies have been overcome. As in any marksmanship course, there will always be those who fall far behind the group or fail to qualify under any circumstances. However, test results show a marked reduction in the percentage of bolos in the Trainfire I courses and a marked increase in the percentage of experts. These results will be discussed more fully later on.

## Field Firing

In Trainfire I, 18 hours are devoted to firing at field-type targets. Before taking up this phase of training the soldier must determine his battlesight zero, that is, the sight setting for 250 yards. Experience and tests have shown that this is the best zero for a rifleman in combat. To determine his battlesight zero the trainee fires at a target 75 yards away. The 75-yard range is used for two reasons: it facilitates zeroing by giving firers a shorter distance to walk to examine their targets and provides transfer value. In combat a soldier will rarely have 250 yards of open ground on which to determine his zero, but he probably can find 75 yards of terrain suitable for zeroing. When the rifle is zeroed for 250 yards the bullets will strike three inches above the line of sight at 75 yards. Thus, for battlesight zeroing the trainee fires at a three-inch-square black paster on an E-type silhouette. He aims at the bottom of the paster and adjusts his sight until the center of his three-round shot group is at the top center of the paster. His group is now hitting three inches above his line of sight at 75 yards and the sight setting used for the final shot group is his 250-yard, or battlesight, zero (Figure 4).

**Figure 4. Battlesight zero.**



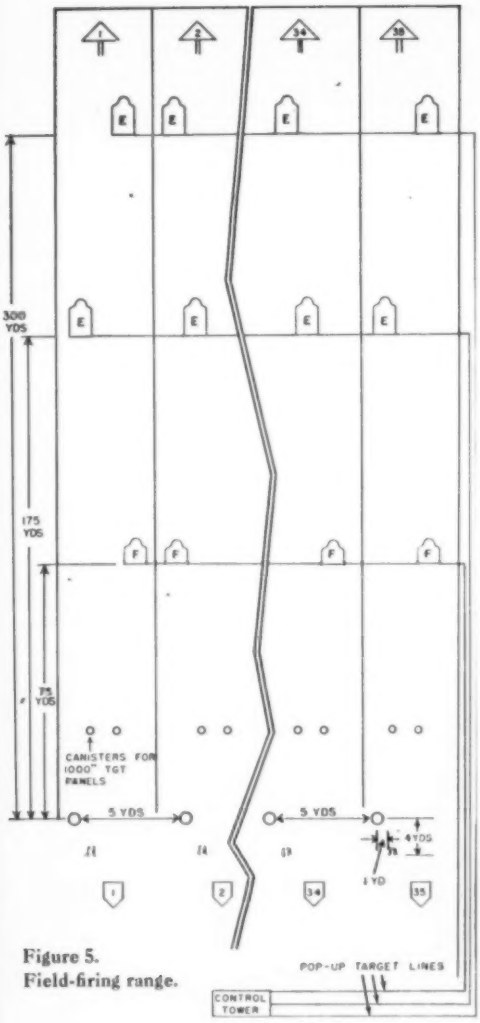



**Figure 5.**
**Field-firing range.**

This setting enables him to hit his *point of aim* at 250 yards.

After zeroing, and adjusting or calibrating the sights to the zero, there should be no necessity for further sight adjustments in elevation or windage. The firer will, however, confirm his zero at a later period, before record firing. Holdoff, better known as "Kentucky windage," is taught in Trainfire I to compensate for the effect of the wind in field and record firing because it is the technique used by most riflemen in combat. The trainee receives instruction, during zeroing and 1000-inch firing, on how to adjust his sight. Once he has found his battlesight zero, however, he no longer adjusts his sight but uses holdoff. More emphasis is placed on sight adjustment if the trainee graduates to sniper training. The sniper normally will have more time to consider his shots before firing.

The 18 hours of field firing are conducted on an uncamouflaged range where the firer engages pop-up targets which appear at set ranges of 75, 175 and 300 yards (Figure 5).

The firer's introduction to this range is practice in engaging the pop-up targets from supported and unsupported positions. No time limit is placed on this introductory firing and emphasis is, of course, placed on accurate fire using the methods taught in previous instruction. Particular attention is placed on aiming: selection of proper aiming points and the proper application of steady-hold factors in all positions. The firer learns to aim at the lowest edge of visible mass, a technique which reduces the possibility of shooting over the target and increases the possibility of hits or short misses which may result in a killing ricochet. It is here that the soldier begins his training in agility, as far as engaging targets is concerned, because he does not know which target will pop up next or at what range. Trainfire I thus gives the recruit training in reacting to a target, i.e., assuming a proper position for the target presented to him.

As the soldier progresses in his field-firing training he fires on simulated approaching targets and surprise targets, advances on and engages surprise targets with a loaded weapon, fires on distant stationary targets, engages multiple surprise targets from a stationary position,

and engages multiple surprise targets while advancing. All of this firing is done under strict supervision but in many cases the firer, after being shown the position, is allowed to select his own position when engaging the target.

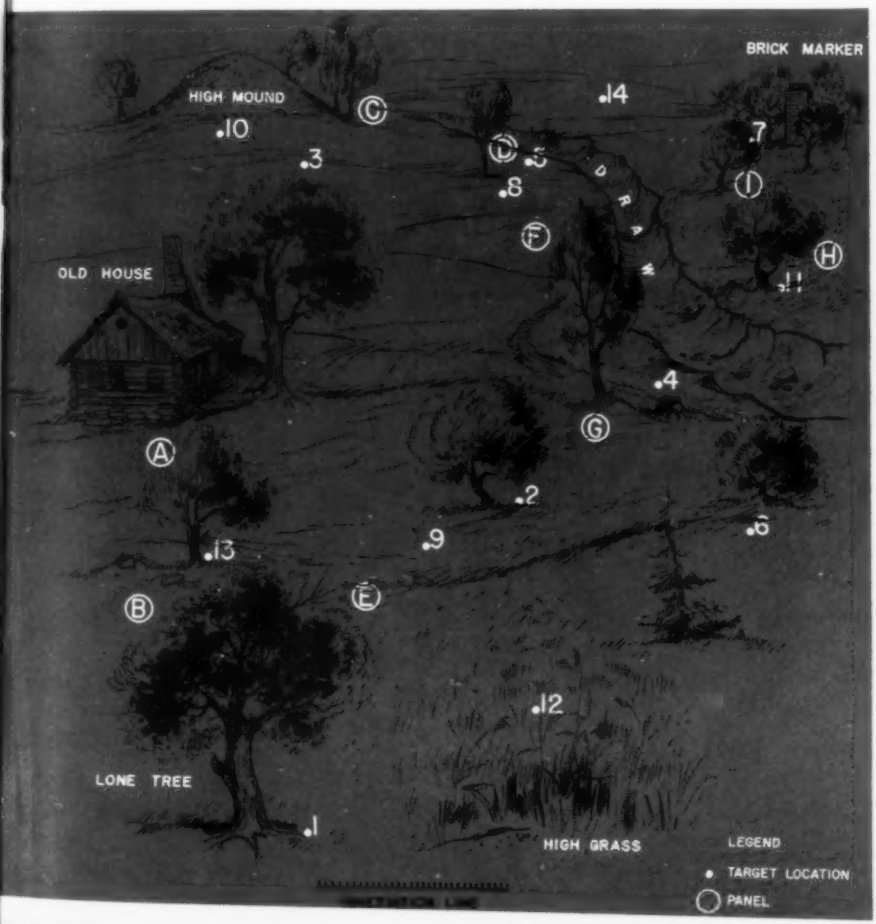
While speaking of position, it must be mentioned that the use of the prone position is played down in Trainfire I because of its limited observation. This does not mean that the soldier is taught to ignore this position but he is shown that his ability to detect targets usually is hampered by its use. This fact is brought out rather forcibly to the student in a demonstration during his initial work in target detection.

Practice in clearing stoppages also is included in field firing by the introduction of a dummy round into certain clips. Since, in the latter stages of field-firing training, the targets are exposed for a limited length of time it becomes important that any stoppages be cleared immediately. This method, although not new, permits transfer of skills from the field-firing range to the battlefield.

## Target Detection

Target-detection training is concurrent with field firing. Training is conducted on a range which gives the firer practice in detecting hidden and partially hidden targets in their natural surroundings. Figure 6 shows how a piece of terrain can

Figure 6. Target-detection range.



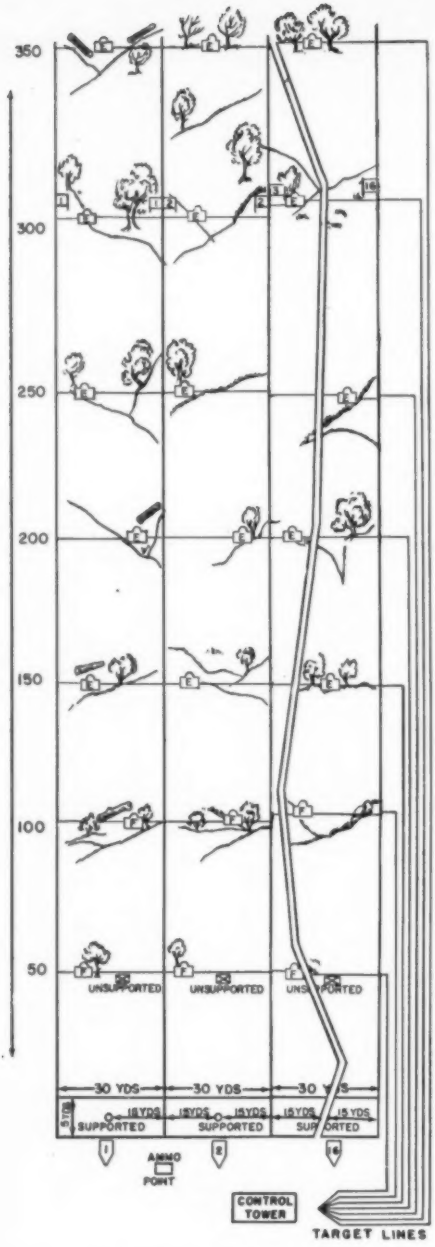



Figure 7. Record-firing range.

be set up for a target-detection range. The trainee is first shown how targets are picked up on the battlefield and then is required to find actual targets on the range. Realism is introduced by the use of smoke, flash, dust, noise, or movement by camouflaged or partially camouflaged human targets. Through this training the soldier learns the principles of scanning terrain and picking up indications of stationary targets. After learning to detect stationary targets, the trainee advances to the detection of single and multiple moving targets and to locating targets by sound (blanks fired from target areas). He then marks the location of a target or targets by referring them to an identifiable object nearby and estimates the range. The next step would be to fire on the target by applying aiming-point and holdoff principles. As mentioned before, a target-detection test is given as part of record firing, helping to stress the importance of target detection in relation to firing.

Some of the principles taught in the detection portion of Trainfire I are much the same as those described in FM 23-5 and FM 21-75. However, the close relation of detection to field and record firing adds new importance to this training and, as shown by test scores, greatly improves individual marksmanship.

## Record Firing

Record firing takes place on a range specially suited for the realism of the Trainfire concept. The range should be about 400 yards long, on terrain which slopes downward for about 200 yards and then rises for another 200 yards. The terrain is left in its natural state except for trees, bushes or tall grass that prevent safe firing or prevent a reasonable portion of an upright target from being seen at the firing line. A range of 16 lanes is recommended for most efficient use of training time, although 12 lanes can be

considered adequate if the terrain will not support more. The 16-lane range will handle about 220 firers in an 8-hour day, while the 12-lane range will enable about 192 men to fire. About 24 men can fire in one hour on 12 lanes. Each lane contains seven targets at 50-yard intervals up to 350 yards, and a sandbagged foxhole at the firing point (Figure 7).

The primary advantages of Trainfire I record firing are its high transfer value and the improved accuracy and confidence which the firer gains through successful completion of a firing course which realistically tests his ability to engage an enemy. Every effort should be made to make the record-firing range as realistic as possible and still provide for safety. This calls for proper maintenance and constant evaluation of the range to be certain that target positions blend with surrounding vegetation at different seasons and fit in with changes caused by active use of the area.

Record firing tests the soldier's ability to detect and hit single combat-type targets at unknown ranges and in natural surroundings. The course achieves its realism by the use of camouflage to represent enemy cover and concealment; leaving natural cover and terrain as undisturbed as possible; and using olive drab, pop-up silhouette targets. The targets are exposed briefly, at unknown ranges and at irregular intervals according to a firing table established for the seventeenth period of Trainfire I instruction. The trainee is required to engage all the targets he locates but only one round can be fired at each target and only hits count—no credit is given for unexpended rounds. The firer must be alert to the constantly changing situation in front of him and must be able to handle stoppages quickly and efficiently.

During each of the two record-firing periods 56 pop-up targets can be engaged. Of these, 32 (eight in each of four lanes) are engaged at all ranges from the foxhole position. The remaining 24 targets are engaged from unsupported positions of the firer's choice, with the firer required to engage these targets while advancing slowly from the 50-yard line, which is the new firing line. The course is fired twice for record, once during the morning, once during the afternoon on alternate days. Since the total score of both firings is the soldier's qualification score, the following minimum qualification has been established:

| | |
|---|---|
| Expert | 68 |
| Sharpshooter | 54 |
| Marksman | 36. |

One of the major improvements on the Trainfire I range is the development of "Punchy Pete," the new electric pop-up target. "Punchy" is "killed" immediately upon being hit, his reaction being to flop directly on his back. "Punchy" has the added advantage of rising directly forward, instead of to the side, and is compact, rugged and completely automatic. Once the target returns to the downward position, whether hit or lowered by the target control board, it is ready to go again. An improved pop-up target is being tested. The range officer or assistants control all targets from a master board.

## Troop Tests

A troop test of Trainfire I was conducted from 1 August 1955 to 31 October 1956 with more than 4200 trainees of the 8th Infantry Division at Fort Carson and more than 6700 trainees of the United States Army Training Center, Infantry, at Fort Jackson. The purpose of the test was to determine if the Trainfire I course of rifle marksmanship better prepared the rifleman to employ his rifle accurately in combat than did conventional marksmanship training. If

it did, then it would be necessary to determine whether the Trainfire I concept was sufficiently superior to the present course of known-distance firing to warrant its adoption as training doctrine.

Troop-test units were broken down into control companies and test companies. The control companies received all conventional basic training, including PRI, KD and transition firing. The test companies received all conventional basic training except for rifle marksmanship—which was taught according to the Trainfire I concept.

Upon completion of marksmanship instruction the trainees of both groups were tested on a record-firing range which they had not seen previously. This range was specially designed to test the individual's ability to detect targets and engage them effectively. All practical precautions were taken to insure equality of testing conditions and the validity of each test, including a comparison of intelligence levels in control and test companies. Scores indicated a significant superiority in the ability of Trainfire-trained personnel to detect targets, estimate ranges and hit targets. They averaged more hits per individual over control companies. It should be pointed out, however, that the average number of hits of test company trainees was still only about 40% of the targets presented.

As a further comparison it was established that the qualification scores of conventionally trained basics when tested on the Trainfire I course were essentially the same as their scores on the KD range. Although not part of the troop test, further study has determined that Trainfire I trained personnel do as well, or better, than conventionally trained personnel when firing on the KD range. Subsequent firing of test personnel, in later stages of training, further confirmed the improved marksmanship ability of these trainees over control personnel.

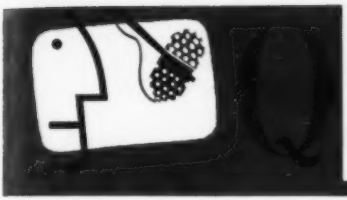
In line with quick-mobilization requirements, it was determined that the relative cost of building a Trainfire I range was less than the cost of a conventional range. In addition, the Trainfire I range was found to be more economical in overhead and maintenance costs. And it eliminated personnel for pit details—a further saving in training time. Now that Trainfire I appears successful, the path is cleared for the testing and probable adoption of Trainfire II which concerns technique of fire and tactics of the rifle squad. Trainfire III and IV, still in the planning stages, will deal with advanced marksmanship and the specialized art of sniping.

The Trainfire I method of rifle instruction can be used with almost any type of weapon and could work well with the automatic rifle or with a new rifle having the characteristics of those presently under consideration.

The United States Army Infantry School has prepared detailed instructors guides on Trainfire for use at the School. The guide for Trainfire I has been published as an interim text and forwarded by USCONARC to Department of the Army with a recommendation that it be published as a DA pamphlet. This text may be available within the next few months.

When the Trainfire I program goes into effect our riflemen will receive practical, realistic training that should improve the effectiveness of our rifle fire in combat.

**This article was prepared through the combined efforts of the Weapons Department and the Combat Developments Office, United States Army Infantry School, and Col Henry E. Kelly (Ret.), United States Army Infantry Human Research Unit.**



# QUARTERLY QUIZ

***Answer the following questions to determine whether you are a bolo, recruit, marksman, sharpshooter or expert. Each question is worth 10 points.***

1. What defensive measures should be taken against possible enemy employment of mass-destruction weapons?

2. You, as an Army officer, are sued in the civil courts of a state for one of your official acts. Must your case be tried in the state court in which the action is first brought?

3. What are integrated training and concurrent training?

4. If a map has a GM angle of 10 degrees west, and you measure a grid azimuth on the map of 354 degrees from the OP to the objective, what azimuth would you follow on your compass from the OP to the objective?

5. What range is recommended for zeroing the 106mm rifle and the spotting rifle during weapons alinement?

6. The most important factor in obtaining maximum operating efficiency from radio sets is:

   a. Increasing the power of the radio.
   b. proper siting of the radio.
   c. using relay or retransmission.
   d. using special antennas.

7. The amphibious cargo carrier M-76 has a total carrying capacity of:

   a. 10 men or 3000 pounds.
   b. 6 men or 2000 pounds.
   c. 12 men or 5000 pounds.
   d. 4 men or 1000 pounds.

8. In the mobile defense how will enemy activity in the gaps between strongpoints of the battle position be detected?

9. What does the term "basic load" mean in relation to a particular type of ammunition?

10. What is the primary difference between the new Trainfire I system of rifle marksmanship instruction and the instruction we are now using?

***(For answers turn to page 95)***

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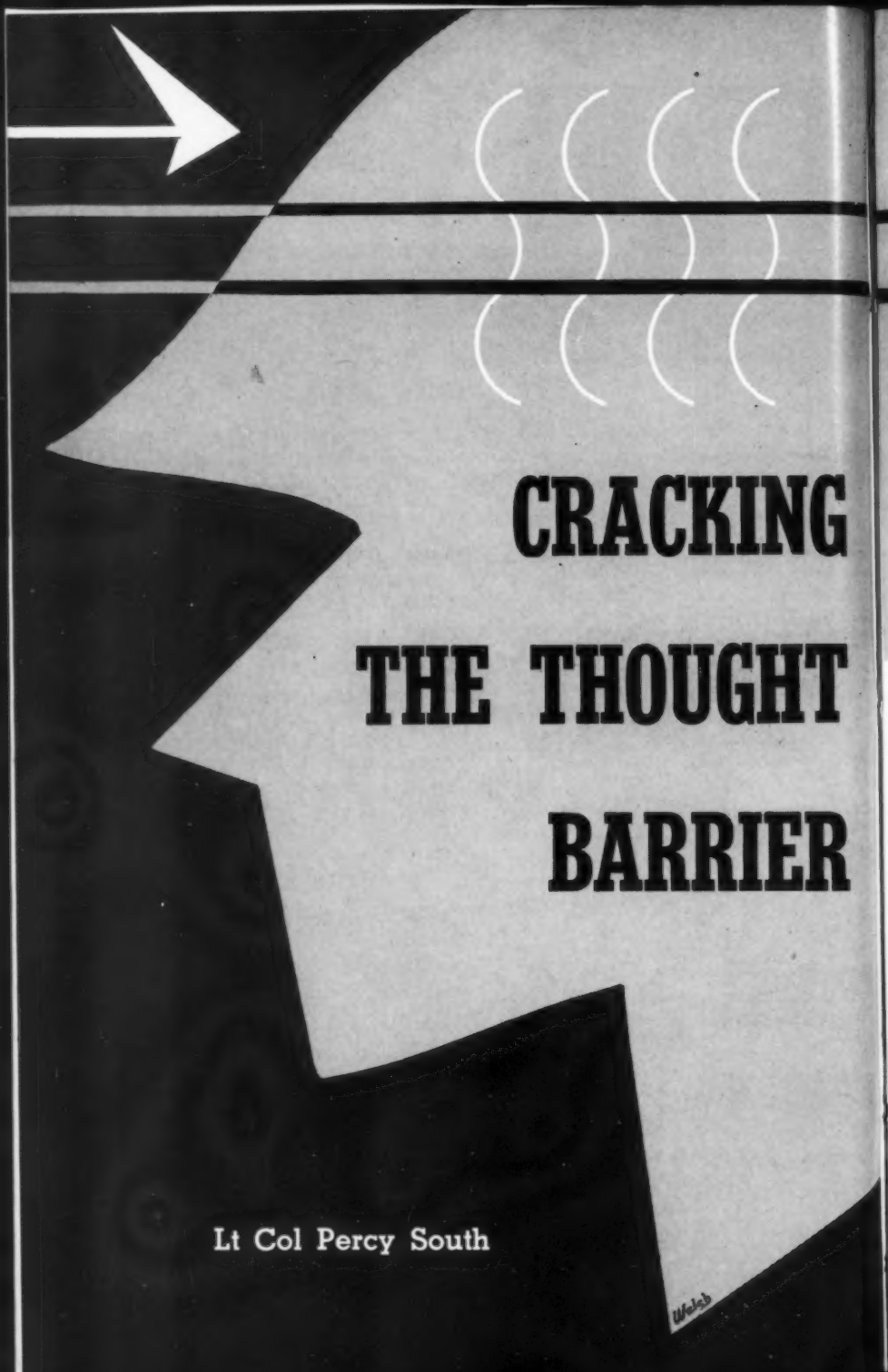
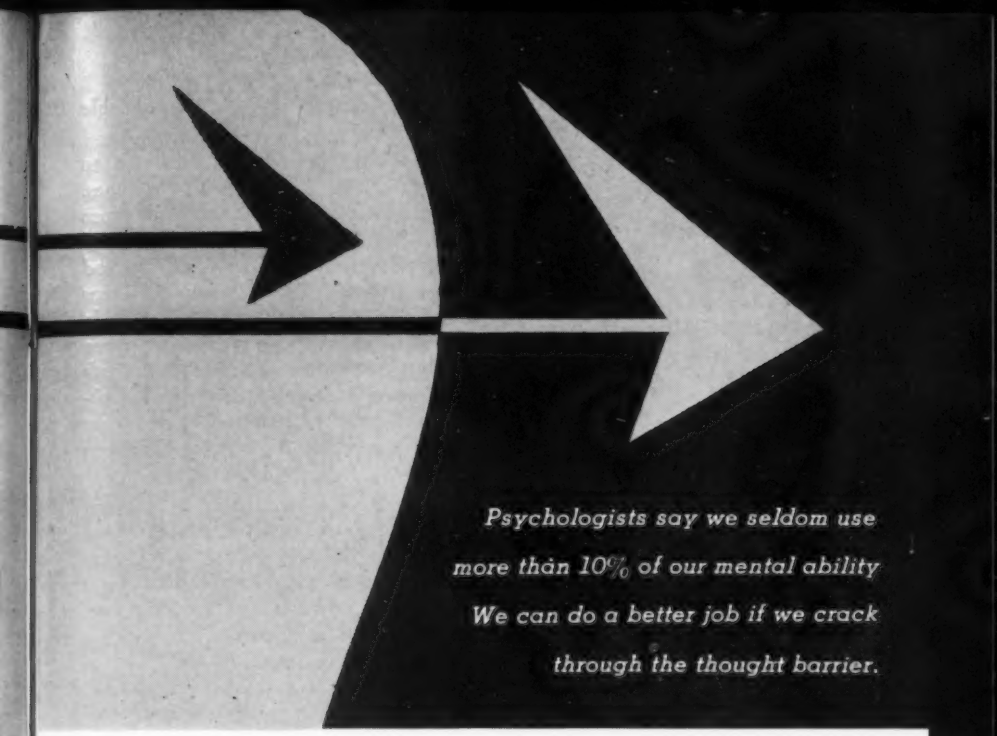
*While we are reaching out to explore fully every possible avenue of approach to the better weapon or piece of equipment in every category, and to examine every idea, we are at the same time determined to keep our feet firmly on the ground of practicality.*

SECRETARY OF THE ARMY WILBER M. BRUCKER



# CRACKING THE THOUGHT BARRIER

Lt Col Percy South



*Psychologists say we seldom use more than 10% of our mental ability We can do a better job if we crack through the thought barrier.*

Several years ago a young Italian immigrant came to the United States and found employment in a granite quarry. A few months after he joined the quarry crew a premature dynamite explosion damaged both his eyes. He was left sightless. To prepare himself for other work he went to a home for the blind. Here he became known to other blind people and to visitors for his unfailing good humor and cheerfulness. One day a visitor asked the young man how he could be so enthusiastic and happy when he had suffered such a grievous loss. The lad replied, "The day I lost my sight was the birthday of my mind!"

According to psychologists most of us never have such a birthday because we seldom use more than 10% of our mental ability. The reason is not hard to find. James Bryce put his finger on it when he said, "To most people nothing is more troublesome than the effort of thinking." Yet, if General Willard G. Wyman's "Invitation to Think" (*Infantry School Quarterly*, October 1956) is to be accepted, this situation must be changed. *More* than 10% of our brain power must be used.

What is the answer?

The answer is that we must devote more effort to training people to think and to creating in the Army the conditions that encourage thinking. Men excel in thinking, as they do in other forms of endeavor, by practicing.

Ideally this practice comes with education. Actually, this is seldom the case. One reason is that schools have paid too little attention to the thinking process. This means that many graduates must learn how to think after they get on the job. The task is easier if the on-the-job atmosphere is such that people feel impelled to think.

**Lt Col Percy South began his military career when he was commissioned in the Officers Reserve Corps upon graduation from Alabama Polytechnic Institute (Auburn) in 1939. He was called to active duty at Fort Bragg, three years later. After serving in the 82d (then Infantry) Division he was assigned to the 101st Airborne Division. He remained with the Screaming Eagles for the rest of World War II, serving as assistant communication officer of the 907th Glider Field Artillery Battalion, liaison officer in the division G3 Section and, finally, as division information and education officer. After the war Lt Col South taught history at Auburn and transferred to the Air Force Reserve. He became a research assistant at the Air University, Maxwell Field, and last year was named professor of recent American history. He has written several books on such varied topics as arctic survival, escape and evasion, communism in China, problem-solving techniques and medical support in a combat air force.**

In the Army we have for years stressed that we want men with initiative. And we have pointed with pride to the fact that American soldiers have been successful in battle because they exercised initiative. But we have not, as Brigadier General S.L.A. Marshall points out in *Men Against Fire,* defined initiative nor agreed as to when and where it can be used.

Initiative—which involves thinking—cannot be taught as a subject, rather it must be taught as a procedure. To be sure we do not have the final answer as to all the procedures involved in exercising initiative and thinking, but we do know enough to warrant considerable instruction.

The object of such instruction is to keep the Army in tune with the times. In war the enemy keeps the Army from continuing to use outmoded and outdated equipment and tactics. In peace the good sense of those in the higher ranks keeps the Army up to date. Unfortunately, in the past, this good sense has often been lacking or thwarted. There is much truth in General George S. Patton Jr.'s observation that the enemy's stupidity, not our brilliance, has often given us success in battle.

The newcomer to military service, now as in the past, is usually much more concerned with those regulations and procedures requiring conformity than he is with any "Invitation to Think." In fact, he may serve for years without being particularly challenged to think or exercise initiative. For this reason if thinking is to be encouraged it must start with creating in the Army those conditions that encourage thinking and the use of initiative.

What are these conditions and how does one create them? Who can help create them? If they can get support, company-grade officers can do more to establish conditions conducive to thinking than anyone else because they are in closest contact with the greatest number of men.

Now, what is the beginning step for the company officer? He must first take a look at himself. Unless he is really willing to think he cannot hope to encourage others to think. Few things are more frustrating to men than to be told, either by word or implication, "Do as I say, not as I do."

Self-examination should be quite exhaustive and the sooner undertaken the better. It should reveal, among other things, what the company officer's goals are, for these will dictate how much and

what type of thinking he will do. Does he, for instance, really want to be a leader or is he primarily interested in security, regular promotions and 20-year retirement?

This may seem a silly question, but it has relevance. The person receiving a commission automatically receives certain privileges and rights. And if an officer keeps his nose clean, stays healthy and doesn't lose any classified documents, he can look forward to regular pay increases, promotions and to 20- or 30-year retirement. The leader, on the other hand, gets all these and much more. He gets the trust and respect of those above and below him, and his subordinates, superiors and associates are loyal to him. This does not mean that officers do not receive trust, respect and loyalty, but rather suggests that the degree and manner in which these are bestowed is quite different.

Col A. R. Gill, USAF, tells of visiting an Army friend several months before the Normandy invasion. During the visit Colonel Gill asked his friend what he was doing. "I," said the officer, "am working for that S.O.B. Patton." Several times during the conversation General Patton was referred to in less than glowing terms.

Two or three months after General Patton landed in France, Colonel Gill happened across his friend again. "How are you and Patton getting along?" he asked. The Army officer drew himself up, stared coldly at Colonel Gill and asked: "Are you referring to *General* Patton?"

Changes of attitude such as this express respect, admiration and loyalty. They come only for officers who are leaders, who work hard to *earn* and *be* deserving of the trust reposed in them. General Patton worked hard all his life to insure that he would lead troops to the best of his ability.

As General Patton did, young officers must ask themselves, "Do I have courage?" "Am I willing to risk my career for what I think is right?" A thorough study of any American military leader will show, I believe, that there were numerous instances when they had to chance their future on action they believed necessary. Men who do not want to be leaders, deep down, will not take such chances.

The willingness to take chances and to sacrifice usually is displayed early in an officer's career when he reveals to himself, his men and his associates that he is willing to study and prepare himself for leadership. By taking a bold step he shows whether he is willing to sacrifice his own time to improvement or to waste it through indolence.

A young lieutenant indicated that he understood the personal choices involved when he said that many newly commissioned officers ". . . fail to realize that the demands placed on an individual by the service in any job or training capacity are far less stringent than those demands which must be self-imposed—specifically, mental and physical discipline. And if this thought could be realized, that these disciplines are simply a part of maturity in a man, then these same people wouldn't feel that the service was placing some sort of extraordinary restriction on their lives."

One division commander under whom I served always took time each day, except when in the heat of battle, to condition his mind and body. Even when we were on the line he continued this practice if fighting was light. Later I learned that this officer had started the habit of reading and exercising when he was first commissioned. He is now the Army Chief of Staff, General Maxwell D. Taylor.

Someone has written that "leading is synonomous with reading." This I be-

lieve to be true because reading reveals how other men solved their leadership problems. We hear often that a leader must be firm, fair, loyal and thoughtful of his men. These platitudes sound fine in a speech but they are sometimes difficult to apply. There may come a situation in which we would be disloyal to our men or even to our superiors by accepting a directive or an assigned duty without question. It may take courage to challenge the "old man's" decision but if we are aware of factors or circumstances which may be unknown to him and which could affect the decision we have a duty to speak up. When do we do this? When do we keep quiet? The standard answer is, "It depends on the situation." This is true, which leads to the conclusion that the young officer must learn about as many different kinds of situations as possible.

Knowledge of such situations can be acquired in various ways. The first and, of course, the best is by personal experience. Others are: by instruction or schooling, by observing other officers, by talking over troublesome questions with associates or seniors and by reading. The latter, in many cases, offers more opportunity for wider acquaintance than the others.

From reading we learn how men think, and that poor thinking has lost more battles than poor fighting. Reading also gives us a standard by which to judge the future. Learning how to fight in one sense is like learning how to navigate—you have to know where you have been to be able to tell where you are going. Finally, reading can help to make us aware of *how* we *think*. More particularly it can help us gain the objectivity with which we must view certain issues and problems.

Almost everyone has had the experience of watching and listening to two or more persons in an argument, or trying to settle a knotty problem. To an outsider who is not emotionally involved in the argument and who is not concerned with trying to prove that he is *right,* the solution may seem perfectly obvious. That it is not equally obvious to the participants is due to the fact that when people are part of the problem their biases, prejudices and emotions are deeply involved, and frequently they are more interested in solving the problem *their* way than in solving it to the benefit of everyone concerned.

A leader may find it difficult to disassociate himself from the problems that confront him, but if he is to be successful he must learn to be impartial and objective.

Reflection will disclose, for example, that each of us has attitudes and convictions derived from the part of the country in which we were born, the economic and social status of our parents, the schools we attended, and numerous other sources. In themselves these attitudes and convictions may not be bad. They are harmful, however, when they keep us from seeing problems as they really are and when they unduly influence our decisions and thinking procedures.

At one time during World War II certain brands of cigarettes were difficult to obtain in PXs overseas. Negroes tended to blame the shortage on racial discrimination. White soldiers blamed the shortage on the Army. The truth was that the shortage existed in the United States and neither race, creed, color nor the Army had anything to do with it.

The misjudgment of the reason for a cigarette shortage in itself is not serious, but the attitudes revealed can lead to serious short circuits in thinking. For instance, when a reserve officer reasons, "All regular officers discriminate against reserve officers, Captain Lowblow is a regular, therefore he will discriminate against a reservist like me," he impairs his ability to judge Captain Lowblow as

an individual. A situation such as this encourages an emotional rather than a thinking reaction.

On the other hand, if Captain Lowblow looks at the reserve officer and sees not the individual but all reserve officers in general, Captain Lowblow may not think either. Little team play will result in such a situation and neither man will fully trust the other. Actually, if Captain Lowblow discriminates against the reserve officer, without cause, it is because he is that type of individual and the fact that he is a regular is entirely incidental.

Another great bar to thinking is custom or habit. All of us drift into doing things a certain way or in a certain manner. In itself this may not be bad. It is only when we come to believe that *our* way is the *right* way, that we run into trouble. From this it is but a short step to the conviction that we know *the* answers. Not only does such an attitude make us hard to live with—it is dangerous.

Twenty years ago Lt Col (later Maj Gen) E. F. Harding wrote that in view of the great weight of unknown factors it would take a crystal gazer to tell who would win the next great war. "However, one need not be a major prophet to predict how it may be lost," he wrote. "Assuming that the contestants are evenly matched, our guess is that the willows will go to the army that is most thoroughly indoctrinated with the belief that it knows the answers."

Young officers are often fond of saying, "There are two ways of doing a thing, the right way and the Army way." When one takes this seriously, he should stop and ask himself, "What is the basis of my knowledge? Do I have any evidence other than an unsupported prejudice?"

Undoubtedly there are many reforms that need to be made in Army ways, as improvements can be made in any large organization. The individual, however, must realize that often he does not like the Army way simply because it conflicts with the way he has been doing things and that *the goals to be reached* are sometimes different. The trick is to learn which ways are best for the organization and the Army. This takes some more learning about different kinds of situations.

Mark Twain once said that when he was 17 he thought his father one of the stupidest men in the world. When he was 27, Twain said, he thought his father had learned more in the preceding 10 years than any man he knew. Sometimes, one can learn in less than 10 years that there is wisdom in many Army customs.

These thoughts lead to the conclusion that the thought barrier is an internal barrier, one of our own creation. It is not other people, or the Army, that keep us from thinking, but we ourselves. Unless we are willing to take the time and effort to think and are truly receptive to the ideas of others, our defenses will withhold almost all thoughts. Self-examination will disclose how much thinking we are willing to do and what defenses we erect against others' thoughts.

To a certain extent a closed mind is like a shield or piece of armor plate. Ideas bounce off as low-velocity missiles ricochet off tanks. The analogy can be carried too far, however, because armor can be penetrated by high-velocity missiles. Idea missiles travel at the speed of thought and light and attack from many different directions, but are deflected unless the thought barrier is lowered from the inside.

For this reason once an officer decides to lower his own barrier and let idea missiles in, he takes the first great step toward encouraging those under him to think. No longer will his men tailor plans and procedures to fit his prejudices, biases and preconceived notions. They

will do what they think is right under the circumstances.

But this is not the whole story. Additional help in creating conditions that encourage thinking and in training people to think can be obtained by exploring three areas. These are: human relations, materiel and tactics and techniques. Let's look at each of these in more detail.

To get better human relations the officer must study human behavior and he must put himself in the shoes of the enlisted man. From this vantage point he must take a look at everything of importance that happens to that individual.

Then he starts questioning himself. If I were a new man reporting to duty what would be the first thing that would impress me about this company? What kind of a welcome would I get? With what kind of men will I have to associate? Who will make my duty assignment and on what will he base the assignment? Will anyone in this company be interested in what happens to me? Do the men in the company have a spirit that indicates a first-class outfit? What will I tell my family about this company and the men in it?

What does this company do? What is it training for? What are the officers like? Do they know their business? How do they give orders?

What are the chances for promotion? Does promotion depend on what you know or who you know? Does anyone help give you a boost up the ladder?

The officer must then ask his men these and many other questions. Answers will be listed and studied. From the list five or 10 questions should be selected to be passed on to the enlisted men for suggestions.

Three precautions should be used in presenting questions. The first is that they should always call for a positive response. "What can be done to welcome men into this company and make them feel a part of the organization?" Not: "What's wrong with our procedures for welcoming new men into this organization?"

The second is to make sure that questions deal with one topic or item that can be limited and made fairly precise. Do not ask broad questions such as: "What can be done to improve morale?" Rather: "What can we do to increase the use of recreational equipment?" Attack broad questions, such as morale, from a number of different viewpoints.

The third precaution to be observed is that (with exceptions to be mentioned later) questions should not be raised that cannot be answered inside the company. In other words, deal only with company affairs. Do not build up frustration by asking for suggestions to problems that require a Department of the Army decision for a solution.

Before any questions are given out all men should be told exactly what is to be accomplished. They should be told that their ideas are desired and welcomed, and that all good ideas will be used if at all possible. If ideas cannot be adopted a full explanation will be given.

One way to pass out questions is to divide the company into groups of eight to 10 men. Set aside a definite period for idea-producing sessions and give each group a different question. Ask each group to select a leader and recorder and to turn in to the company commander all suggestions.

When the suggestions are received the company commander and his officers can evaluate them or turn suggestions over to other groups for evaluation. Whatever the method, it should be clear to all concerned that the company commander has the final word as to what will be implemented. Best results are usually obtained when the men do the evaluation and are made responsible for implementation.

What can happen when such an approach is used was illustrated by Lt Col Ralph Keller at Stanford University. In the fall of 1953, freshman enrollment in AFROTC took a big drop, primarily because the Korean War no longer stimulated interest in ROTC. If another drop came in 1954, Colonel Keller knew that the unit at Stanford might be discontinued. Under these circumstances juniors and seniors in advanced ROTC were asked: "What can be done to increase freshman AFROTC enrollment at Stanford in 1954?"

The students took the problem, analyzed it and came up with a number of suggestions, all of which they implemented. They wrote personal letters to all freshmen who had applied for enrollment at Stanford. They stuck pins on a map to pinpoint the location of incoming freshmen. Next they put in pins showing the location of all men signed up for advanced AFROTC. Where locations coincided, personal visits were made during the summer. In short, the students planned a campaign and put the campaign into action.

What were the results? In 1954 the freshman enrollment in AFROTC at Stanford *doubled*. In many other schools where ROTC was not mandatory (as it is in land grant colleges) freshman enrollment dropped from 1953 figures. At Stanford, however, enrollment increased not only in 1954 but also in 1955 and 1956, showing that long-term factors were at work.

A program such as this causes men to be more conscious of problems dealing with people and to look for solutions to these problems. It also causes people to take a deeper personal interest in the organization and the part they play in it. And, it brings a new awareness and appreciation of the supervisor's responsibilities.

Problems involving higher authority should be given only when the company commander and his men have exhausted all their resources and believe a problem urgently needs solution. When such a problem is given the men should be instructed to visualize *all* the results that will flow from a recommended action. They must try to see the problem from the battalion and regimental commanders' point of view. When the problem with its recommended solution goes forward, it should contain a discussion of all feasible alternatives and a summary of the advantages and disadvantages that will follow adoption.

Materiel "think" sessions should be devoted to accomplishing three objectives: Finding more and better uses for the materiel in the company and available to the company; developing simple and complex modifications to materiel in use; and developing ideas for new materiel.

Few of us are free from what psychologists call "functional fixedness." That is, once we use an implement or item for a long period we are unable to visualize any other use for that implement other than the use we commonly make of it. For example, a rifle is commonly used for firing. It could, however, be used for a club, a funnel, a support, a splint or for making a spark to start a fire.

Finding additional uses for a rifle may seem a trivial occupation, but lives have been lost and saved because of such trivialities. The point is that no weapon or piece of equipment is in itself versatile. The versatility resides in the user. This means that the more we can stretch our imagination to think of unusual uses for ordinary things, the better we will be able to think in an emergency. Take, for instance, the sentry who couldn't shoot at an enemy prowler because his gun jammed. He jumped in a jeep and ran over the prowler. This seems like a rather commonsense solution to the problem, but many people would not have thought

of it. Getting through the Normandy hedgerows was much easier after a sergeant put a bulldozer blade on a tank. A simple solution — *after* the sergeant thought of it.

Functional fixedness and the tendency to make less than maximum use of materiel can be avoided by asking: "To what other uses can this object be put?" Many answers to such questions will not need evaluating. Others will need exploration to determine their feasibility.

After some work has been done with the more common items that are used every day, variety can be introduced by bringing in new materiel and new techniques. For example, give each member of a think group a piece of aluminum foil. Ask him to feel and examine it carefully. Then ask, "What is this like?" and, "What are its properties?" Try to get as many answers to these questions as possible, and then ask for additional uses of the aluminum foil.

By using techniques such as these men will get practice in thinking and will be convinced that they can think. In fact, many will be pleasantly surprised at their own capability. Use this capability to get suggestions for modifications to existing equipment and to get ideas for new equipment. Stimulate thinking by asking what would happen if we made this larger, smaller, heavier, lighter, more compact, a different color, shorter, longer, wider and so forth.

To get ideas for new equipment, think sessions should start with a thorough discussion of the company mission and the relationship of the company mission to that of the battalion and regiment. With this knowledge clearly in mind, explore what the battlefield of the present and the future will look like. Then ask for specific suggestions for materiel the company will need to accomplish missions it may be assigned. The aim should not be to completely develop a new piece of equipment in the sense of visualizing how it will be built, but rather to develop the idea of the *function* the new materiel will perform. If the concept is good the idea can be passed up through channels for evaluation and possible development.

Discussions centered around the materiel available to the company can lead naturally into questions about tactics and techniques. Questions in this area should be framed in such a manner as to get people to think about all the ramifications of the issue presented.

Suppose the men are asked, "How can we insure constant and correct communication in an attack?" Among other things, the answers to this will reveal the common conception of what communication is. If there are misconceptions, additional questions in this area can be directed toward creating awareness of the problems involved and the need for having a good idea of what must be done. On the battlefield initiative comes with understanding the need of the moment and with developing determination to carry through with an action once started.

Interest in tactical problems can be stimulated by placing a problem box in the company area into which suggested problems can be dropped. Each week the problems can be taken out and submitted to an impartial board to select the best problem. The man who submits this can be given a three-day pass or rewarded in some other appropriate manner. The suggestion box can be used for other types of problems and suggestions.

A great deal of interest in all types of think sessions can be stimulated by using Alex Osborn's "brainstorming" techniques. Basically, brainstorming is an extremely clever, psychologically sound procedure for getting a large number of

ideas from a small group in a limited time. Best of all, it is immensely stimulating. Intelligently used it is a tremendous morale booster.

Space does not permit a description of Mr. Osborn's methods, but those interested can write to the Creative Education Foundation, Inc., (a nonprofit organization), 1614 Rand Building, Buffalo 3, New York, for a copy of *Principles and Procedures of BRAINSTORMING.*

The procedures and program outlined in this article are merely suggestive of what can be done to develop the atmosphere in which each man can do his best. Within a relatively short time after think sessions are started and the three areas of human relations, materiel, and tactics and technique are explored, a distinct change will be noted in the way men think. The officers start the ball rolling by indicating that they are receptive to new ideas and that they encourage the presentation of new ideas. The program outlined above provides the means for expressing ideas and gives the stimulus needed to bring the imagination into play.

At the second annual meeting of the Association of the United States Army General Maxwell D. Taylor said, "Technology is opening up vistas of new possibilities in terms of new weapons, new equipment, and new techniques at a rate which challenges the capacity of the best minds and most vivid imaginations." Our ability to take a penetrating look at these new vistas is determined largely by how successful we are in cracking our own thought barrier. Our minds and imaginations can function if we are determined to use them. Whether our brain wears out or rusts out depends entirely on us. If we decide to oil it and use it, then we are ready to accept General Wyman's "Invitation to Think."

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**When an Army officer has a constructive idea or an illuminating professional experience, I feel that he has an obligation to communicate it so that the Army as a whole may benefit. With its large professional readership, *Infantry* magazine provides an excellent medium for such communication. It is a forum where solutions to many of our atomic-age problems —especially those which confront the Infantryman in the lower units—will receive wide and productive attention.**

GENERAL WILLARD G. WYMAN

# so you want a command

BY LT. GENERAL BRUCE C. CLARKE

We hear many officers say, "I'd do anything to get a command." If you are one of these, do you really mean it? Are you suited for command? Have you really considered what having a command entails? What are your answers to the following questions?

- Are you willing to devote all hours of the day and night, seven days a week, to your command?
- Is your wife willing to do likewise when needed in order to make a happy "Army community" in your unit area?
- Is your family willing to be secondary, if necessary, to the "Company," "Battalion," "Group," "Regiment," "Combat Command," "Brigade," or "Division"?
- Are you willing to learn, teach, stress and live with the "basic fundamentals" necessary to make your unit good and still believe that your great talents for "bigger things" are not being wasted?
- Do you like to be with young people? Can you live with their energy, points of view, and the problems they create?
- Are you willing to take the hard knocks that come from carrying responsibility for the failure of your subordinates?
- Can you juggle, at the same time, all the balls of training, maintenance, tests, administration, inspections, communications, messes, supply, athletics, marksmanship, discipline, public relations, without dropping any of them?
- Are you able to do many things "concurrently," or are you a "consecutive" doer? Can you manage a complex job?
- Can you receive and carry out orders? Are you a good "follower" as well as a "leader"?

- Can you stand tough competition from like units in your outfit and still retain a spirit of cooperation and teamwork with them?
- Are you physically and emotionally fit to carry the load?
- Do you have the courage to make and stand by tough decisions?
- Are you and your family willing to "live in a goldfish bowl" where your actions are closely observed by both subordinates and superiors?
- Are you still enthusiastic and cheerful when confronted with seemingly impossible tasks to be performed with inadequate means?
- Are you willing to take responsibility yourself when things go wrong in your unit and correct a bad situation rather than blame it on the staff or a higher headquarters or a subordinate?
- Are you willing to do your best with "what you have" even though it apparently is inadequate?
- Are you confident you can produce a superior unit with the ordinary run of manpower? Can you inspire personnel to produce outstanding accomplishments?
- Are you willing to take a chance on being relieved for attaining only mediocre results?
- Do you really want "command" or do you just want "to get command on your record"?

If your answers to these questions are "Yes," you should fight to get a command. And, if you hear an officer say "I want a command," you should confront him with these questions. If his answers are "Yes," he is undoubtedly sincere and you should make every effort to see that he gets a command. No assignment will ever give greater satisfaction or enable an officer to contribute more to the Army and our Country.

PARGETER
56

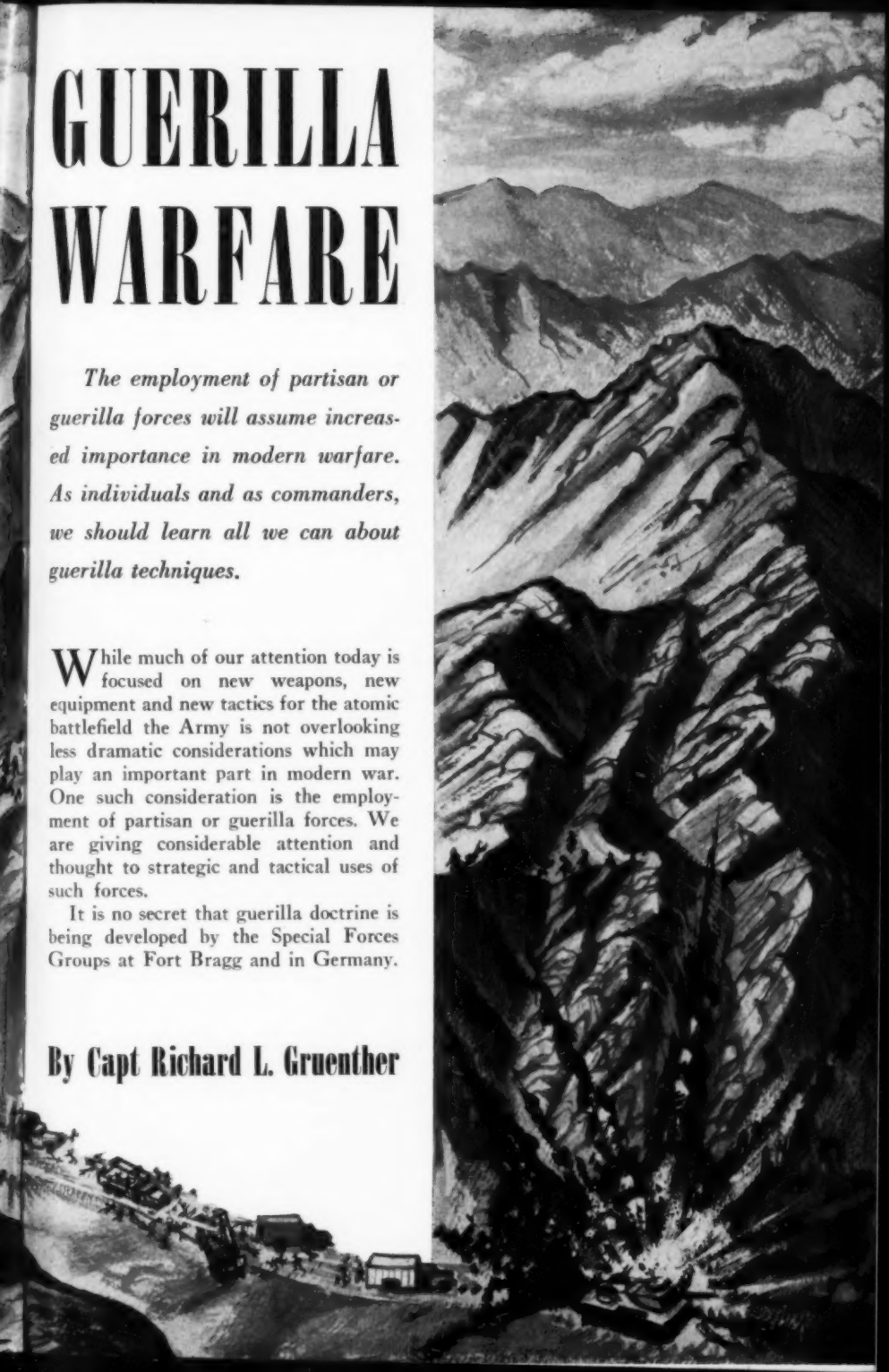
# GUERILLA WARFARE

*The employment of partisan or guerilla forces will assume increased importance in modern warfare. As individuals and as commanders, we should learn all we can about guerilla techniques.*

While much of our attention today is focused on new weapons, new equipment and new tactics for the atomic battlefield the Army is not overlooking less dramatic considerations which may play an important part in modern war. One such consideration is the employment of partisan or guerilla forces. We are giving considerable attention and thought to strategic and tactical uses of such forces.

It is no secret that guerilla doctrine is being developed by the Special Forces Groups at Fort Bragg and in Germany.

**By Capt Richard L. Gruenther**



CAPT RICHARD L. GRUENTHER is a 1946 graduate of the United States Military Academy. After completing the basic Infantry officer and Airborne courses at The Infantry School, Capt Gruenther competed in the 1948 Olympics at London, England, with the U.S. modern pentathalon squad. A year later, he went to Korea where he fought with the 17th Infantry Regiment from Inchon to the Yalu River. Returning to this country, he spent three years as an instructor in the Department of Tactics, United States Military Academy. Last year, he completed the advanced and Ranger courses at The Infantry School. Capt Gruenther is presently assigned to the 28th Infantry Regiment, 8th Division, in Europe.

It is no secret either that our first reserve Special Forces Group was organized not long ago.

Although guerilla operations are currently the primary concern of Special Forces, we in the Infantry should know all we can about them. The day may come when such knowledge could be valuable to us as commanders or as individuals. The future battlefield, as we visualize it, will be characterized by dispersion and independent or semi-independent operations. Instances in which individuals or units will be isolated or cut off can be expected to increase. In some situations an individual may find it expedient to join a guerilla band or even to organize a partisan force on his own initiative. Units may carry on guerilla-type activities until such time as they can rejoin friendly forces. (Troops who escaped from Bataan and Corregidor successfully carried on operations against the Japanese for years.)

We all know that guerillas fought and harassed the enemy in the occupied countries of Europe and Asia during World War II. Such groups as the French Maquis, the partisans of Tito in Yugoslavia, the Polish "Home Army," the Greek guerillas and the American and native guerilla bands in the Philippines all had a significant effect on the outcome of that war.

Many partisan bands attained a high degree of organization and achieved notable tactical successes. With advances in communications equipment and aerial-supply techniques this type of warfare can be expected to become even more effective and more widely used in the future.

German General Hubert Lanz, who had two years of experience in anti-partisan warfare in Greece and Albania as commander of the German XXII Mountain Corps, has stated, "The tactics of the partisan is the most effective form of combat in future war. It will be a counterpart to the major weapons of wholesale destruction." And Lieutenant General Ponomarenko, Commander in Chief of all partisan warfare in the USSR during World War II, said, "If we ever fight another war, partisan warfare, with all that we have learned about it, will be one of our most powerful weapons." An insight into what the Soviets learned is found in another of General Ponomarenko's statements, "In two years of guerilla warfare in the rear of the German invaders, Soviet guerillas annihilated more than 300,000 invaders of whom 30 were generals, 6,336 officers and 1,520 airmen. . . ."

One does not have to search long before discovering that Communist actions as well as words point out the importance they place on this type of warfare.

Since the end of World War II, guerilla activities in Greece, Burma, Malaya, Indonesia, Indochina and other areas have shown us that this is an instrument of cold war as well as a hot one. With this brief background, let's take a closer look at this business of guerilla warfare.

The history of past guerilla operations indicates that the best areas for the conduct of such warfare are mountains, deserts, jungles, wooded areas and sparsely populated districts. Guerilla bands function best in the areas in which they are organized—partisans who have lived a long time in one area will fight more effectively there than in some place with which they are not familiar.

A guerilla (the term is used interchangeably with partisan and irregular) is a combatant who is not a member of an organized and recognized military force. Guerilla (or unconventional) warfare is conducted by predominantly indigenous forces, organized on a paramilitary or military basis and fighting independently or semi-independently. Usually guerillas are recruited from the native civilian population, although regular troops, cut off by the withdrawal of friendly forces, also may become guerillas.

According to FM 31-21, "Guerilla Warfare," March 1955, the broad aims of guerilla strategy are to: lessen the enemy's combat effectiveness; delay and disrupt the operations of the enemy's forces; and weaken the morale and will to resist of a hostile military force.

Partisans can achieve these objectives by cutting signal communications, gaining information and transmitting it to friendly forces, disrupting supply lines, destroying supply and industrial installations. They can assist the combat operations of friendly conventional units by forcing the enemy to divert much of his combat power to the defense of rear areas. Guerilla warfare, then, capitalizes on the enemy's inability to defend himself in strength at all times in all places.

To be successful in the variety of tasks they are called upon to perform, partisan groups must follow certain principles of unconventional warfare. These include:

1. Making maximum use of surprise, deception, shock action, stealth, evasiveness and concentration of force at the selected point and time.

2. Maintaining mobility and flexibility.

3. Maintaining the offensive (guerillas rarely conduct a static defensive operation).

4. Disengaging and withdrawing quickly when a mission has been accomplished—or when it becomes obvious that a particular mission cannot be accomplished with the forces available.

5. Using simple plans.

6. Insuring coordination of effort within the guerilla forces and between the guerilla and conventional forces.

7. Forcing the enemy to make extensive efforts for his security.

8. Causing the enemy to dissipate his mass to counter the actions of irregular forces.

9. Limiting the movement of the enemy's units.

Operations by irregular forces are, by themselves, usually incapable of gaining a military decision. Such forces should be given strategic objectives which assist and are closely correlated with the general military and political aims of a sponsoring power.

In view of these considerations it is important, in the actual conduct of guerilla operations, to rely on the mobility, enterprise and effectiveness of the forces employed rather than on numerical strength. Generally, the best results are obtained with small detachments under capable and versatile leaders, all operating under the direction of an experienced senior commander. The enemy is harassed by repeated threats and raids.

Movements and attacks are made at night, whenever practicable. During the day large forces remain concealed, leaving reconnaissance patrols in contact with the enemy.

Small detachments operating separately from a main force may seriously interrupt the enemy's supply system by destroying bridges and attacking supply trains. The main force maintains communication with these detachments so that future operations may be planned to take advantage of their successes.

Although guerillas may incite civil disturbances and carry out sabotage in occupied areas, they are more likely to concentrate on such military operations as ambushes, raids and limited attacks. The recent fighting against the Russians in Hungary was carried out principally by guerillas.

*Ambush* is a surprise attack against moving or temporarily halted targets such as railroad trains and motor convoys. Defiles or ravines in mountains or woods are excellent ambush sites—commanding ground, concealment and camouflage are usually available. Roadblocks, demolitions or recoilless weapons may be used to halt fast-moving columns at the desired spot. Attacks are usually made at close range for maximum effect and automatic weapons may be employed to cover the entire target in depth.

Enemy advance guards usually are permitted to pass through an ambush position; a designated element of the ambush force is detailed to deal with them. The attack is launched on a signal. Action is brief, withdrawal rapid. However, if the enemy cannot counter the guerilla blow, and there is no threat of enemy reinforcement, partisans should salvage usable supplies and equipment, destroy the remainder, and withdraw. Extensive security measures are used to cover movement to and withdrawal from the ambush position. Often secondary ambushes, some distance from the site of the main effort, destroy or delay enemy reinforcements. If the guerillas are not strong enough to destroy the enemy, the action is ended at a prearranged signal. The planned withdrawal is covered by security detachments. The force may withdraw by detachments in several directions to frustrate and complicate enemy pursuit. Subsequent ambushes may delay or destroy enemy pursuing forces.

The *raid* is a thoroughly planned surprise attack against static targets such as rail lines, canals, bridges, power plants, supply installations and communication centers. A guerilla raiding force, as required by the situation, may be organized into three principal elements, each with a specific task:

One element is designated to eliminate guards — as silently as possible since surprise is essential for a raid.

Another element carries out the main mission, usually one involving demolitions.

A third detachment may cover the operation and withdrawal.

Withdrawal should be rapid and complete. A properly planned raid will permit withdrawal by covered routes.

Guerilla forces which have attained a high level of organization and training —and which are properly armed and equipped—are capable of limited attacks against isolated enemy garrisons, combat units and installations. Often irregular forces will be more effective against certain objectives than conventional units of comparable strength. Agents, and even small units, may be infiltrated into the objective area. Coordinated surprise attacks should be launched simultaneously against every enemy echelon: security, command, supply, communications. The guerillas try to isolate their objective from reinforcement by harassing and interdicting railroads, roads and wire communications. They may establish road-

blocks and ambushes to delay or destroy troop and supply movements into the objective area.

These limited attacks may become more frequent and may be conducted on a larger scale as the battle zone of friendly conventional forces approaches the guerillas' area of operations. Such operations may be supported by the conventional force. They are generally conducted during critical periods of enemy operations requiring unusual supply and troop movements.

Two almost classic guerilla actions of World War II illustrate some of these principles. They also show, in a concrete way, how effective well-planned partisan operations can be.

The first action took place in the summer of 1942 in the mountains of northern Greece between the cities of Arta and Joannina. About 100 Greek guerillas ambushed a 21-vehicle Italian convoy bringing supplies from Joannina to Arta. A mountain-ringed road through the Luron Valley was the Italians' main supply route to southern Greece. Italian motorized patrols tried to keep it open for the convoy which left at noon every other day from Joannina.

Several weeks of observation had told the Greek partisans that the column usually consisted of 18 trucks protected by tanks at the front and rear. Some 60 troops were scattered through the column as a protective force.

The night before the scheduled ambush was a busy one for the guerillas. They placed demolitions on the old stone bridge across the Luron River and installed antitank mines 540 yards down the road from the bridge. Between the demolition points they prepared firing positions on the steep hills on either side of the road. Heavy rocks were positioned so they could be sent hurtling to the road by tripping a lever. The poles of the Italian telephone line along the road

were partially cut through; by pulling on attached cables the guerillas could topple the poles, severing communication between Arta and Joannina. Two partisan groups were organized into assault detachments to close with and eliminate any enemy troops left alive after the initial attack. Shortly after dawn the partisan leader briefed his men, sent them to their firing positions and clambered back to his hilltop observation post from which he could see some distance up the valley.

The Italian commander in Joannina held his column up when he was informed that partisans might be active in the area. He strengthened the convoy with a truck carrying two machineguns and an assault detachment. On each of the 18 supply vehicles rode two guards armed with machineguns. The tanks at each end of the column had two machineguns mounted in a revolving turret. The column left for Arta four hours late, at 1600 hours.

As the last vehicle crossed the bridge the exit from the valley was blocked by

the exploding mines. The lead tank skidded and rolled down the embankment. Almost immediately another, more powerful detonation destroyed the Luron Bridge. The Italians were trapped. The cracking of rifle and machinegun fire and the exploding of grenades left the Italians demoralized and confused. The only resistance came from the tank at the end of the column which had barely made it across the now-ruined bridge. But several guerillas quickly set off a concentrated charge under the tank which turned it over, burying its crew in smoke and flame. The partisans rushed at the burning column, killing every enemy soldier who had survived the initial attack.

The guerilla leader reinforced his security guards at both ends of the valley before ordering mules to be brought down to remove captured supplies. The guerillas stripped the dead Italians of papers, valuables, weapons and ammunition. What they couldn't take they burned. They were miles away when Italian troops arrived at the ambush site the next day.

For the lightly armed Greeks the operation was a complete success. They suffered few casualties and captured a good stock of useful equipment. Although the Italian convoy was more heavily armed with superior weapons, the Greeks overcame this advantage by choosing the time and place for the ambush, by surprise and by the sudden, violent blow of their attack. The partisans made maximum use of ideal guerilla terrain.

In contrast to the shock action which won for the Greeks in the Luron Valley was the stealth by which a small guerilla band conducted a successful raid in North Africa in May 1942.

Vladimir Peniakoff, a British officer serving as a guerilla leader behind German lines in Libya, received a radio message to "spread alarm and despondency." Although Peniakoff's main job up to this time had been to gather intelligence from his numerous Arab contacts, he took this message as the go-ahead signal for more decisive action. Rommel's second offensive was under way, with the objective of capturing Tobruk.

Realizing that Rommel's tanks were having trouble with their fuel supply, Peniakoff chose a 100,000-gallon gasoline dump at El Qubba as the target for his first offensive operation. Italian troops were in charge of the dump. Peniakoff's force consisted of two other British officers, six Arabs from his guerilla detachment and an Arab named Mohammed el Obeidi, a civilian from the town of El Qubba.

On the night of 20 May Peniakoff and Mohammed el Obeidi worked their way to the gasoline dump and made a thorough reconnaissance. In two hours of stealing through the 10-acre barbed-wire enclosure he found 96 lots of gasoline, each lot made up of 27 drums. Several days later Peniakoff returned with the remainder of his band, which was divided into three parties of one British officer and two Arabs each. Mohammed el Obeidi did not accompany this group. All parties were to arrive at the dump at 2100, set their charges and return to a meeting point by 2215.

There was no moon, but the sky was clear and the stars gave enough light to work by. Across the dump three Italian trucks were being loaded with gasoline drums. Even the drums near this work detail were charged because any noise made by the demolition party was muffled by the loud complaints of the Italian troops about their unwelcome night work.

Although one party was late in returning to the assembly point, all nine men were moving toward the hills to safety by 2230. Shortly after 0100 the first charge went off and by 0155 the skyline

to the rear of the guerillas seemed to be on fire. Rumbling, thunderous explosions followed each other in quick succession. Drums of gasoline were blown off the ground. When they burst they filled the air with blazing balls of fire. Peniakoff estimated that he had deprived 200 German tanks of about 12 days' fuel supply.

The guerillas' success was due to a perfectly planned and executed operation against an ideal target. The dump was strategically important, poorly protected and not vulnerable to attack by other means. The Italian units were 150 miles behind the frontlines and thus were extremely casual about protecting this vital area. Although a company of Italian troops was within two miles of the dump no guards were assigned to it. Peniakoff had learned from the British Eighth Army that it would be impossible to send an air strike against the dump. The British had few planes, and these were assigned to daily bombings of Benghazi and Tripoli. Guerilla action was the only way to destroy the gasoline.

These are not unusual examples. They are presented here only to illustrate guerilla techniques and to stimulate thinking. The history of guerilla operations is made up of similar or more significant success stories.

Objectives for partisan activities are unlimited. They can be as varied and as daring as circumstances and the audacity

of the guerilla force dictate. However, certain factors and techniques are common to all guerilla activities. Every successful operation capitalizes on surprise, terrain, shock action and enemy weaknesses.

The study of guerilla operations and techniques coupled with imagination can help us in modern combat.

*This is the first in a series of articles on unconventional or special types of warfare which can be expected to have continuing or increased importance in modern combat.*

*Future articles will cover such subjects as jungle warfare, desert warfare and arctic warfare—Editor.*

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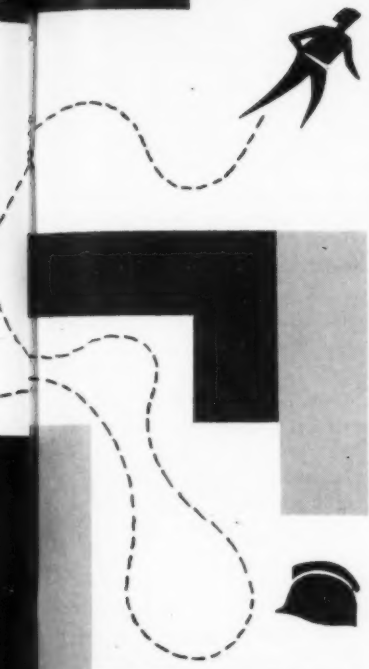
# EVASION and ESCAPE



By M/SGT JAMES F. QUINN

*The treatment we may expect if we are ever taken prisoner by a communist foe prompts us to know how to escape and evade.*

Capture in combat can be a fate worse than death. Investigation and study of communist psychological-warfare practices during the Korean conflict show that death might have been more merciful for many of our prisoners of war than endurance of the brainwashing and other treatment to which they were subjected. It is apparent that future conflict with such an enemy will involve even more savage attacks on our prisoners, particularly on their minds. Future brainwashing techniques can be expected to include such refinements as, the application of tranquilizing drugs, electric brain stimulations, scientific starvation and extreme sensory deprivation.

Can we expect any man to stand up under such brainwashing techniques? The medical profession says "no." Dr. Joost A. M. Meerlo, a Dutch psychiatrist, coined the word *menticide*—murder of the mind—to describe brainwashing. And, an American psychiatrist, Dr. James Miller, speaking to the American Psychological Association, in September 1956, advocated that the American serviceman who carries secret information be provided with some concealed means of committing suicide in the event he is captured and is unable

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to withstand brainwashing. As grim as this suggestion may be, it certainly stimulates thought and question about methods of keeping out of the enemy's hands and of escaping if captured.

The average American serviceman does not possess or carry classified information—at least not as such. However, the Communists pursued their brainwashing program under the premise that *all* enemy prisoners possessed at least some bit of military information which could be extracted and used for reconstructing the whole. Consequently, they processed most, if not all, prisoners of war through primary phases of brainwashing and, on the basis of prisoner pliability, selected "useful" subjects for more complete processing.

It is time, then, to learn all you can about evasion and escape. Unless you know what evading and escaping entail you may never be successful.[1] You may run away from the enemy, but you will not evade pursuit or recapture. Unless you have had some training in moving through mountains, deserts or jungles—unless you know about maintenance of direction, elementary first aid, woodcraft, concealment and camouflage, and the enemy—you simply become lost and ultimately recaptured in hostile territory.

In the event of capture, you must maintain mental alertness, and act with common sense and self-discipline. The actual moment of capture is a critical one. It is a fearful moment for any soldier when certain factors will determine, then and there, whether he will live or die. If you demonstrate immediate submission, you will stand a better chance of living. You must at all times face the captor and keep your hands elevated or clasped to your head, unless otherwise directed. You must make no movement in any direction on an oral command, unless the command is in English and fully understood, or is accompanied by a directional hand and/or arm signal.

You must, at this time, be prepared to be stripped not only of your personal jewelry and trinkets, but also of your shoes and, quite often, other articles of clothing. To resist or show resentment may prompt the captor to kill you on the spot. Watches, rings, good shoes and clothing are luxuries for the average enemy soldier. Even enemy junior officers have been known to loot prisoners of war.

Personal effects might disclose items

[1]Evasion techniques apply to two situations: when a unit is cut off and its members seek to avoid capture by evading the enemy; when a soldier escapes from captivity and seeks to avoid recapture by evading the enemy and returning to friendly lines. This article discusses evasion after escaping from captivity. However, the same or similar techniques will be used by cut-off troops seeking to evade capture in the first place.

which will determine whether your future status will be that of a general prisoner or a special prisoner. If you have been careless and have kept on your person maps, documents or typewritten papers of any kind, whether military or personal, you undoubtedly will become a "special" prisoner. As a special prisoner you will be closely guarded at all times, until you have been delivered into the hands of military intelligence. Your chances for escape are thus reduced at the outset.

The habit of continually studying terrain before, as well as after, capture cannot be stressed too highly. Constant terrain study will increase the chances of effecting a successful escape. Too many men have gotten away from capture only to discover that they were lost and traveling deeper into enemy territory. The few men who finally effected escape under these circumstances have reported feelings of extreme despair on discovering that they were lost, and lacked any definite direction for successful evasion. They were tempted to surrender to the first enemy troops sighted.

When you are first disarmed by the enemy, you probably will be close enough to the front to reach safety a short time after escape. But as you move to the rear the chances of successful escape diminish with each additional yard of enemy territory covered. Therefore you should become escape-conscious at once. The next incoming shell or burst of gunfire may force your captor to seek cover —to throw himself on the ground, or perform some similar instinctive action. Watch your chances; when this happens get away fast—this is the time to run.

If such an opportunity fails to arise, there still may be other chances to escape in the early stages of your capture which will not come again. So be on the alert for them. In all probability, your captor will be inexperienced in capturing and guarding prisoners. He may be fatigued and deeply engrossed in his own personal problem of staying alive. Look for such symptoms. You may be able to take advantage of them.

Once you have been escorted from the immediate vicinity of capture, you normally will be taken to a collection point near an enemy company CP. Here again inexperienced guards are to be found. Here, too, chances for escape may be presented by the usual confusion and disorder of the combat area. The more prisoners that are held here, the greater are the chances for unobserved movement. Usually there will be no stockade. The confines may be only the barriers imposed by the eyes and ears of the armed guards —guards who can be distracted from constant vigilance by the actions of other prisoners, artillery fire, actions of fellow guards, the need of food or drink, or the call of nature.

Contrary to widespread belief, a slight wound is sometimes an advantage when captured. Even a small cut or scratch can be dramatized into an apparently disabling wound by forcing it to bleed freely into the bandage, then reversing the dressing so that it looks worse than it is. It will require very little acting ability to pretend that the wound has drained your strength, that you are dazed and exhausted—and in no condition to escape. Successful escapes have been made through this ruse. The guard is inclined to discount the possibility of escape by an obviously wounded prisoner.

Also, when escape is made under such circumstances search normally will be concentrated in the immediate area of escape, under the assumption that a wounded prisoner cannot travel far or fast. So get away as far and as fast as you can.

A sergeant tells of his escape after being captured while on a patrol with an element of the 2d Infantry Division in Korea. He says that early in the action

he had torn his forearm on a sharp rock. He hastily bandaged it and continued with the group.

"We had entered a narrow draw," he says, "when the ambush was sprung. Three men were killed with the first blast of automatic-weapons fire from both sides of the draw. I jumped for a shallow ditch and, as I did, something tore my helmet off with an ear-splitting crash. I was dazed. I don't know how long I laid there before I could get my senses together enough to move. There was no firing going on when I did move. I looked around and saw five of the patrol standing in a close group with their hands on their helmets. I counted four dead.

"I was still dizzy. So dizzy in fact that I fell four or five times as I tried to join the others. There were only two Chinese holding guns on the boys and as I fell down again both of them walked over to where I was lying. One of them kicked me in the ribs and pointed toward the group. The second soldier rattled off something in Chinese pointing to his arm and then mine. He was talking about my bandaged arm. I looked at it and it sure looked like hell. I guess I must have lain on it when I fell and had squeezed blood not only through the bandage but also out the sides. Some scratches sure bleed a lot.

"The first soldier laughed, handed his rifle to the other, bent down and took off my wristwatch and my boots.

"My head had stopped spinning by then and I started to get up. The soldier who took my stuff yelled something at me and kicked me in the chest. I fell back and waited for him to shoot me. He didn't. Instead, he bent down again—and damned if he didn't take off my socks. They were a real heavy pair—new. Both soldiers said something and got a real loud laugh out of their remarks. Then the first one kicked me in the ribs again and pointed to the boys with their hands on their heads.

"I got to my feet, and right there decided to play like I was real hurt. So I stumbled over to the boys and pretended to fall again as I reached them. The two Commies made us take off our tin pots after looting the bunch of their watches and wallets. Then they herded us down the draw. I continued to pretend being awfully weak, staggering, stumbling and falling down every once in a while—and got a few bruising kicks from one and

sometimes both of the guards as they tried to hurry me along.

"We had reached the end of the draw and were just a hundred feet out of it when mortar fire started to come in on us. The guards got all shook up and started yelling and pointing back at the the draw. I fell down again and lay there. The shells got a lot closer and the guards ran right on past me as they herded the boys back into the draw. I got up as more shells hit, and ran like hell toward our lines in my bare feet. I knew the area real well and made it back OK. I never saw the other guys again."

This report points out five important escape techniques:

1. The sergeant submitted at once to capture when he realized no alternative was possible.

2. He did not resist or show resentment when looted of his watch, shoes and socks.

3. He became escape-conscious immediately by determining to play up his superficial wound.

4. He seized the opportunity to get away when the guards became concerned with their own personal safety during the shelling.

5. He knew the terrain.

When captured, resist interrogation at once. Don't be defiant but adhere strictly to the Armed Forces code of conduct. Immediate resistance to interrogation has a twofold purpose. First, of course, is to deny the enemy useful information in accordance with the code. Second, to establish your uselessness as an information source as quickly as possible and to avoid being placed under close guard.

The enemy will attempt to extract information from prisoners even as far forward as the company CP. Here, the first answers you give to the interrogators may establish your value to the enemy intelligence effort and your susceptibility to more intensive questioning. At this time a prisoner is classed as *useful, doubtful* or *useless*. Under no circumstances should you attempt to deceive the enemy by giving false information. True or false, any information you offer not only violates the code of conduct but also establishes you as a useful subject for enemy brainwashing. You will be earmarked immediately for special attention, placed under close guard and, in all probability, rushed to a higher intelligence collecting agency.

The safest and most effective way of resisting interrogation is to pretend to be dazed and physically and mentally exhausted. Be useless, act dumb or vague—and be less carefully guarded.

The temptation to give false information to enemy interrogators is prompted, even in the face of grave danger by the ingrained American habit of kidding—a peculiarly Yankee brand of humor. The majority of American servicemen indulge in this tall-story telling and this is considered one of our most colorful spontaneous morale builders.

A grimly humorous tall story made the rounds of front-line units during the early days of World War II.

A certain rugged American Infantryman had told his German captors a story concerning a proposed Allied attack in a sector far from the point of his capture. The story was accepted by the Germans who were at that time entirely unfamiliar with the American soldier. Consequently, they rushed heavy reinforcements to that sector, leaving their own area exposed—with subsequent disastrous results.

The Germans fled but before doing so they dragged the GI into a French stableyard to be shot. As he was being tied to a post, the German officer in charge remarked that shooting was too pleasant a death for such a liar. "Pvt Smith," he said, "you are a dirty lying Yankee pig. You have caused the death

of hundreds of good German soldiers with your monstrous lie. Your name will go down in history, I promise you—an American soldier who murdered hundreds of fine young German soldiers with a blackhearted lie."

Saying this, the outraged officer walked over to the firing squad and gave the preparatory orders that lifted eight rifles in line with GI's chest. He paused in his commands and said, "Have you anything to say, Pvt Smith?"

The soldier nodded. "My name will go down in history for this?" he asked.

"As a murderer," the officer shouted, "do you have anything to say to that?"

The Yank made a wry face. "Sir," he said, and his voice was choked with emotion, "I wish I hadn't told you that last damned lie."

The officer smiled savagely. "Ah," he shouted, "at last you regret the lie that murdered our good men."

"Oh, not that one, sir," the soldier said, "I mean the one that will murder your history—my name ain't Smith."

This seemingly innocuous "funny" story, plus endless others, may have influenced many servicemen to become contemptuous of enemy intelligence—with tragic results. After recovering from the first shock of capture this subconscious contempt may prompt the prisoner to answer even the simplest questions with absurd lies.

Such attempts to delude interrogators are reckless rather than courageous, stupid rather than clever. They achieve no purpose other than to self-condemn yourself to brainwashing—with all its modern refinements—or to execution on the spot. Through this mental attitude you may irrevocably deny yourself the slightest opportunity to escape.

From the vicinity of the company or battalion CP you probably will be taken to a regimental, or higher, prisoner-of-war collection compound. Here you may be interrogated further; officer and enlisted personnel will be separated.

During the march to the regimental area, whether by motor or foot, further escape opportunities may exist. Even with a large number of guards escorting the column you should look for these opportunities. You should study the terrain for bends or dips in the road ahead, for rough terrain near the road or for fields of tall grass or grain. As the column enters a bend or a dip in the road, that part of the column in the bend or dip becomes momentarily invisible to a number of guards and there are a minimum number of eyes watching it. Coupled with any other favorable factor, this is the time to attempt escape either from the truck or foot column.

Once you make the break you must expend all effort and direct all thinking toward putting distance between yourself and the column. If you survive the first sporadic small-arms fire that will surely come if the guards detect your escape, immediate pursuit is unlikely. A search party must be organized. Then search will first be made in the vicinity of your escape. It is almost instinctive to search the nearest hiding places for something that has suddenly become "lost"—in this case a desperate human being. To hide is also a very human weakness common to even the strongest of us when exposed to dangerous circumstances of this type. You must resist this and get as far from the initial search area as possible.

The opportunities for escape from a halted motor column are few. Not only are armed guards generally posted in the road but each vehicle probably will have an additional guard on the cab with an automatic weapon. Perhaps the only possibility in this situation will arise if the vehicles have been stopped by strafing or shelling. The resulting confusion may present an ideal opportunity for escape—especially if the column is hit.

When moving in a foot column, a number of things may come up which would make a break possible. There are no specific rules to be applied here, but there are certain circumstances which favor escape and which must be seized without hesitation. Several examples of such circumstances have been reported by successful escapees:

"One of the guards nearest me took advantage of a halt, to urinate. I had about five feet to go to reach the bank at the edge of the road. I didn't bother to get to my feet and run—I just started rolling, like kids do. The guard hollered, shook the rifle he was holding in one hand and continued urinating with the other. He was still yelling and urinating and waving his rifle as I ducked behind the rocks at the bottom of the slope . . ."

"I think a break was made or attempted about a hundred yards up the road toward the head of the column. First there were a lot of shots like a machinepistol firing, then a lot of shouting. Most of the prisoners jumped to their feet. The second they got up I started running like a rabbit for the tall grass a short distance away. My guess is that nobody saw me—at least not a guard—because not one shot was fired after me. I made the grass all right. It was rice and I ran right on through it, water and all . . ."

"The road was extremely dusty. The powdery dust lifted and filled the air with each footstep. The wind came straight down the length of the road and made a choking tunnel through which we marched like grey ghosts. The guards walked about fifteen or twenty feet off on both sides of us to keep out of the dust. For some strange reason—a miracle to me—the wind suddenly shifted and the guards on my side were hidden in the blowing dust. I knew that this would be just about my last chance and I took off as fast as I could run. I saw one guard; in fact I ran right past him, thinking that he was just a black stump or a rock until he fired at me. Then he disappeared into the dust . . ."

These, and countless others, were crucial moments seized as opportunities for escape. Such moments are fleeting at best and only the alert and escape-conscious prisoner will recognize and grasp them with success.

To escape from the enemy while under armed guard is not to escape to freedom. Escape to freedom is accomplished only by evasion of the enemy. This entails successful application not only of knowledge obtained in military training but also of the strictest self-discipline.

Regardless of the area in which you escape, you will face hardships. Perhaps the most difficult of these to overcome is the relentless drive of impatience. If not quickly controlled, this state of mind will betray you. It will either cause you to become reckless or drive you into activity beyond your endurance. Once in the grip of extreme fatigue, superinduced, perhaps, by thirst and hunger, you will become not only physically, but mentally, incapable of evading capture. Evasion

will become secondary to the importance of alleviating the craving for water, food or rest. You will take any risk to fulfill these needs.

Obviously, then, you must look to your physical needs before you consider progress through enemy territory. Each step of the flight must be planned on the basis of how long you figure you can maintain your strength. Let the distance take care of itself. Your primary consideration will be water supply. Unless you have some means of carrying water, your travel may be restricted to a constant search for water. You will be limited to short distances, from one point to another. You must look for food while on the move. Here again self-discipline plays an important part in successful escape. The temptation to seek food in the vicinity of inhabited areas is difficult to resist, but long experience indicates that most fugitives come to grief at this point. Successful theft of food is all but impossible in most areas. Not only is food scarce in primitive or war-torn communities but what food the natives possess may be "on the hoof," to be slaughtered when needed, or in the form of raw grains to be prepared as required. Theft of these precious foodstuffs will be more difficult where animals and grain are kept in the dwelling. Barns, or similar livestock buildings, may be nonexistent in such areas.

Food, then, must come from the countryside—from roots, herbs, grains, nuts, berries, and whatever small animals may be killed by various expedients. Information on edible plants within the area in which you have been committed for combat will be contained in all future precombat orientations. Lacking this information, the safest rule to follow is: Eat only what you know is edible, until you have tested what you think may be safe. If you see birds or animals eating roots, grains, nuts, berries, bark or lichen, try a small amount yourself. If, after three hours, you have not developed any unpleasant symptoms, you may consider the item edible and eat a moderate amount. Any plant that tastes bad or bitter should not be tested beyond a mere taste. Most toxic plants are easily identifiable by their bitter taste and smell. (Note: A future *Infantry* article on survival will discuss living off the land in some detail. —Editor.)

The safest time to travel in enemy territory is during darkness. Travel may be slower, but it is far less dangerous insofar as observation by the enemy is concerned. Your travel may take you out of the militarized area but your danger will not be lessened to any appreciable degree.

So far as you are concerned, there are no friendly natives. If you wish to argue this point, think back to the Korean conflict and remember Major General Dean and the "friendly natives" who betrayed him to the Communists.

It is important to remain unobserved by either civilian or military. This is best accomplished by traveling at night. Night travel also reduces the temptation to contact any natives you may see working in the fields or around their dwellings. It also reduces excessive precautions and resultant fatigue which may be imposed by efforts to remain concealed from suspected distant observation.

In selecting the day's hiding places, you must be extremely cautious and avoid the obvious. You should not select a large cave, for example, as such caves generally are well known in the area, and are certain to be investigated by enemy search parties or patrols. A cave just large enough to accommodate a single body is the best choice, if at all isolated from habitation. Very little effort will be required to camouflage the location to make it relatively safe from even careful search.

Hiding in culverts, regardless of remoteness from habitation, also must be avoided. Culverts present two real dangers. The first, strangely enough, lies in the possibility of a sudden heavy rain filling the culvert. Secondly, the existence of a culvert indicates that the road bears normal to heavy traffic and any movement in the vicinity is likely to be observed.

For obvious reasons, hiding places on open ridges or bald hills must be avoided.

Hiding places, then, require careful selection. The desire for shelter must be secondary. Concealment is foremost. To this end, you should burrow into dense undergrowth, bed down in fields of tall grasses or grains, hole up among the rocks or hillocks of broken terrain, or dig yourself in if you are on a barren plain. All hiding places require varying degrees of camouflage for additional security from observation. Digging in on a barren field usually is the least difficult to effect but the most difficult to maintain, for here the only camouflage lies in covering yourself with soil as you lie in a shallow excavation. Any movement of the body will dislodge some of the soil and require immediate repair.

If you attempt to disguise yourself in native garb or an enemy military uniform you will probably make yourself conspicuous and risk identity as a spy, if recaptured. Spys are summarily executed —after extensive torture. In any event try to retain some type of military identity such as the ID card, dog tags, etc.

Evasion, escape and survival are important subjects in the Army's combat training curriculum. They are especially necessary since the Communist enemy has chosen to debase, degrade, brainwash and destroy men captured in combat. The techniques discussed here are only a small part of the story. Each of us must seek out personally additional knowledge which could be helpful if ever needed to successfully evade or escape from the enemy.

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## WHERE IN THE WORLD . . .

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**Combined-arms task forces will be essential and routine elements of our tactics on the battlefield of the future. We must be ready and able to use them quickly and effectively.**

*This is the third and concluding article in the series on small-unit task forces. It discusses the battalion-size force. Whether we fight with the current Infantry organization or the recently announced pentagonal division we must be able, on short notice, to break conventional units into smaller semi-independent mobile task forces and to unite them again just as quickly, for massed effort.—Editor.*

**By Major Charles D. Folsom**

# SMALL UNIT TASK FORCES

Commanders at all echelons have always faced the problem of training for tomorrow's operations with organizations and weapons of today. The emphasis which has recently been placed on the organization and training for mobile task-force-type operations, however, is a decided departure from inflexible training patterns we have known in the past. Previous articles on small-unit task forces have portrayed the impact of the atomic weapon on tactics, and the steps that are being taken within present organization to provide a common sense approach to the inherent problems of dispersion, mobility and firepower.

When our present Infantry division is reorganized under the pentagonal structure, many of the elements which now must be combined from TOE units to form a task force will be organic. However, it is visualized that even these units will need some tailoring to accomplish specific missions. The same basic principles and considerations now given to the forming of a task force will apply to the organizing of such forces.

This article will deal with the "battalion-size" (Type A) force which is the largest force included in Training Memorandum Number 13, USCONARC, dated 4 June 1956.

The Infantry regiment is the normal source for the organization of the battalion-size force. The current regiment is capable of and should be able on at least two hours' notice to organize, assemble and employ a mobile battalion-size force composed of a provisional headquarters and service company, a TOE rifle company, a TOE regimental tank company, a provisional direct fire support company, and a provisional indirect fire support battery. TOE units, or elements thereof, should be used to form the provisional companies and batteries so that the basic team organizations that have trained together in those units are left undisturbed.

**Task force mobility is provided by armored personnel carriers**

Such a force is capable of attacking, counterattacking, pursuing, delaying, and defending. It has the ability to strike the enemy with lightning speed by means of fire, maneuver and shock action in order to dislodge the enemy, repel his assault or delay him before he has the opportunity to build up strength at a critical point. The capabilities of the force to effect rapid dispersion when necessary should not be minimized when operating under atomic conditions. It is entirely mobile, self-sufficient, heavy in firepower, and has adequate voice radio, visual and wire communications.

**. . . Army aircraft**

Commanders in the field have been encouraged to experiment with various task-force groupings, reorganized within the present TOE but adaptable to future organization, to determine the types which appear to be most effective. This experimentation should be integrated into existing programs with minimum disruption to training presently required for the Infantry regiment. The directive is explicit in the requirements for valid experimentation, and prescribes firing exercises and use of Aggressor forces in two-

sided tactical exercises to provide a realistic evaluation of the mobile force. A restriction, however, is placed on simulating equipment which may not be available to the unit.

Task organizations of reinforced-battalion size habitually will have attached means and weapons organic to or in direct support of the regiment. When required, means and weapons organic to the division may also be attached such as light artillery, elements of the division tank battalion and reconnaissance company.

In training in the employment of the battalion-size force, all forms of available transportation are to be utilized, to include not only wheeled vehicles, which normally will be provided by the division, but armored Infantry vehicles, army aircraft, and even landing craft, where applicable. Of course, the tank will also provide transportation for Infantry elements. In visualizing the use of army helicopters, possibilities exist for expanding the types of operations which the battalion-size force may conduct. Many situations will prevail where the Infantry and lighter elements of the force may be airlifted, and the heavier tanks and engineer equipment join the remainder of the force in rapid linkup action. Some examples are river-crossing operations, seizure of critical installations or key terrain features, and isolation operations in pursuit.

The organization of the Type A force used in this discussion will be based on the "sample" organization in the training memorandum, with no appreciable deviations (see Figure 1, next page). It is apparent that flexibility *within* the organization is the answer, and not the over-all organization itself. As long as this size task force has the component elements of command, maneuver, and direct and indirect fire support, with minimum essential service support, it

**. . . and tanks.**

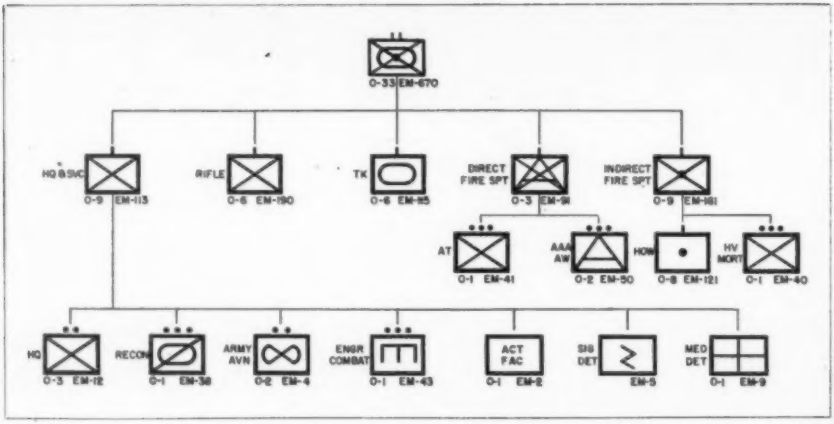



**Figure 1. Mobile force Type A (battalion size). The headquarters section consists of the task-force commander, executive officer, operations sergeant, communications officer and communications section (two wire teams and one radio team). Its equipment includes five jeeps, one ¾-ton truck and the following radios: one AN/VRC 10, one AN/PRC 10, one AN/GRC 9, one AN/GRC 7. The rifle company uses TOE weapons and transportation; battalion provides six additional 2½-ton trucks from headquarters and service company if distance precludes Infantry from riding on tanks. In addition to TOE vehicles the tank company receives 12 2½-ton trucks from headquarters and service company for ammunition and supply. Other units use TOE equipment, augmented as necessary by battalion. Note that the above task force is based on current Infantry organization. Modifications will be necessary for units of the pentagonal division.**

will be able to accomplish missions requiring rapid movement and decisive action.

To better understand the considerations and actions required to form and employ a battalion-size mobile task force let's look at a hypothetical situation.

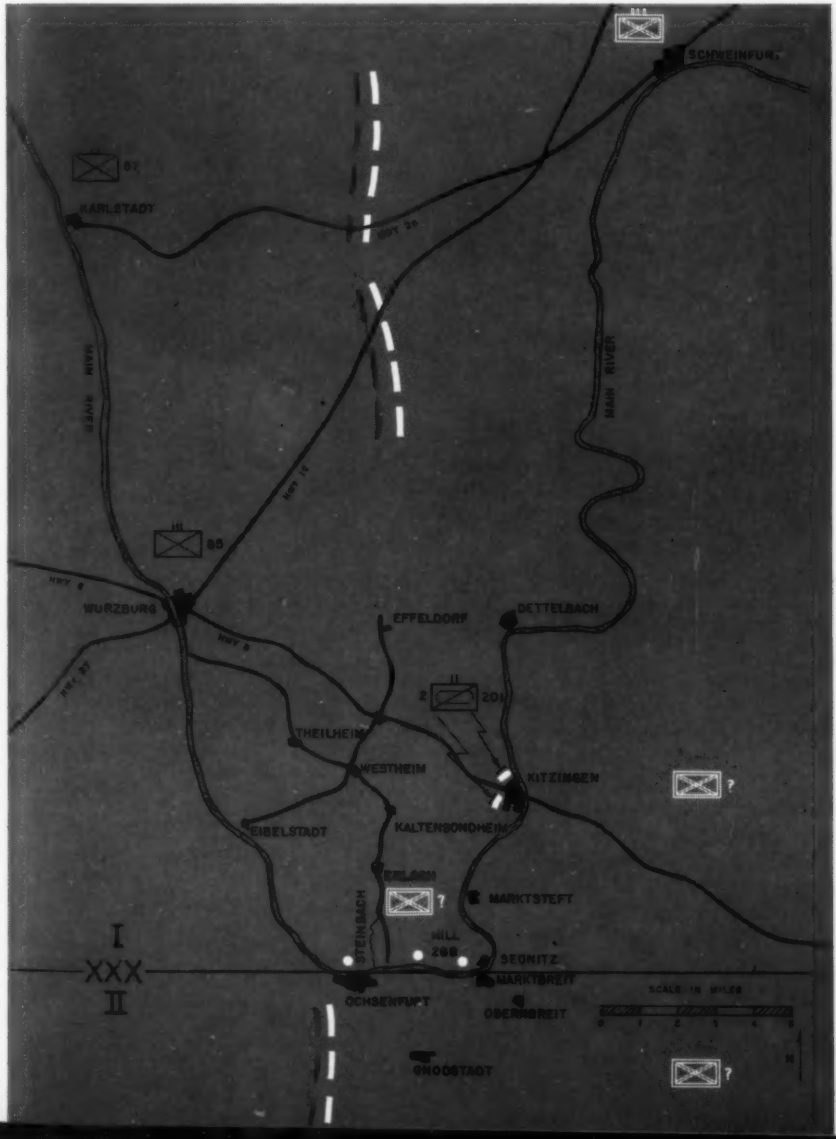
I US Corps, after seizing a crossing of the Main River on a broad front from Wurzburg north, has continued the attack to the east against determined enemy resistance. The general locations of the forward units of I Corps are shown in Figure 2. Elements of II Corps south of the Main River in the vicinity of Ochsenfurt also are attacking to the east in an attempt to bypass the river on the south. These units have made very slow progress, but are able to place fire on the crossing site where the bridge was formerly located at Ochsenfurt. Both sides have an unlimited atomic capability and have employed tactical atomic weapons in support of ground operations. Air parity exists, with either side capable of gaining local air superiority for limited periods only.

Reports from reconnaissance aviation operating to the southeast indicate that scattered Aggressor units are still in the area between Wurzburg and Kitzingen and that Aggressor is concentrating forces southeast of Marktbreit in apparent preparation for a crossing in that vicinity. The 2d Battalion, 201st Armored Cavalry, moving on Highway 8 from Wurzburg to Kitzingen, has become heavily engaged with Aggressor elements holding a bridgehead in the Kitzingen area, and is now attempting to contain this force. All bridges across the Main River have been destroyed; how-

ever, floating-bridge equipment has been observed on the south bank of the river in the Marktbreit area, and Aggressor is capable of executing an unopposed crossing there at this time.

It is now September, and the weather is clear and cool. The gently rolling terrain in the area is trafficable, except in areas along the Main and its tributaries where banks are steep and difficult to negotiate. All streams with the exception of the Main River are fordable. Observation throughout the area is generally good with the exception of the large wooded area just north of Ochsenfurt-Marktbreit, where trees limit observation to from 100 to 200 yards. Wind is from the west at 3 to 5 miles per hour.

**Figure 2. Forward units, I US Corps.**



At 170700 September Commanding General, 10th Infantry Division, ordered Colonel, 85th Infantry, to dispatch a mobile force to prevent enemy crossings in the Marktbreit area from the Stein Bach to Hill 263 and to maintain contact with elements of II Corps south of the Main River.

Colonel, 85th Infantry, contacts Lieutenant Colonel, 1st Battalion, 85th Infantry, and directs the formation of a Type A task force organized as shown in Figure 1 except that the organic I&R platoon will be used instead of the reconnaissance platoon and a section of machineguns, 81mm mortars and 106mm AT weapons from the heavy weapons company will be added. A platoon of armored Infantry vehicles will be attached.

Maj Morris, Executive Officer of the 1st Battalion, 85th Infantry, is selected to command Task Force Morris. Having received the order from the Regimental Commander, Maj Morris determines the objectives he must seize to accomplish the mission and considers the general areas he must defend.

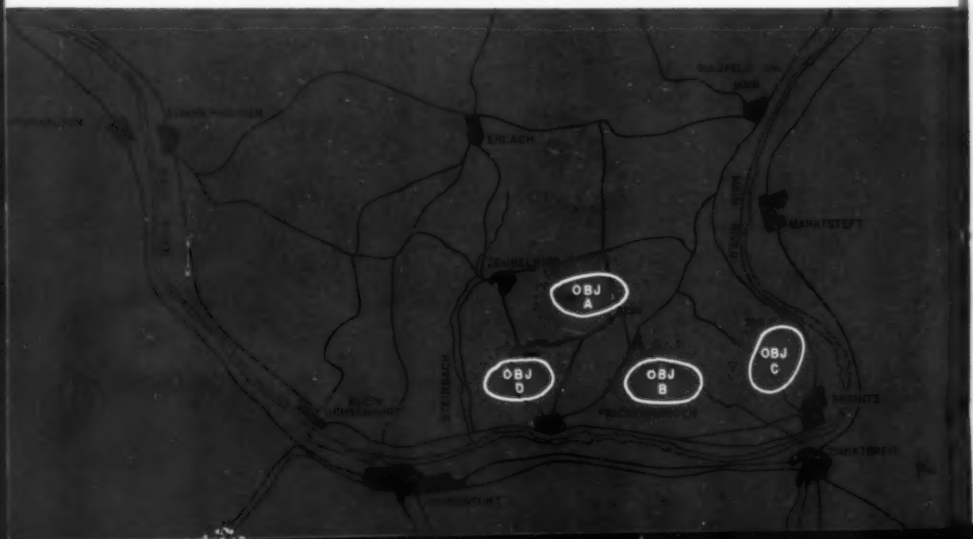
Figure 3 shows the objectives the task-force commander has selected; the same terrain will be organized for defense.

Seizure of these objectives insures control of the higher ground dominating possible crossing sites for Aggressor. Seizure of objectives A and B is the priority task because of their dominance over the objective area. Objectives C and D are necessary to insure control of the entire area and to provide an adequate defense against crossings over the Main River.

Defensive positions will be established on the objectives to conserve time and take advantage of the defensible terrain. After seizure of the objectives, consolidation must be accomplished rapidly so that defensive positions can be prepared before the enemy is capable of attacking in strength. Additional position areas are unnecessary for the accomplishment of the task-force mission. Security elements must be positioned near the river to extend observation over the hostile approaches. Patrols will operate in the area west of Stein Bach and north of Ochsenfurt in order to provide warning of possible Aggressor interference from that area. Security measures, such as roadblocks, must be undertaken as required.

Once the objectives and areas for defense have been selected, Maj Morris plans for his attack and defense mission. He considers the forces available and organizes for combat based on the over-all mission. He also considers missions for his subordinate teams and the formation

**Figure 3. Objectives of Task Force Morris.**



to be used during movement to the objective area.

The 1st platoon, Company A, 88th Infantry Tactical Carrier Battalion, is attached to Company A, 85th Infantry, to provide transportation for the rifle platoons of that company. Unit integrity within the tactical carrier platoon is maintained to the greatest possible extent. Maj Morris then organized for combat as follows:

TASK FORCE HEADQUARTERS:
Provisional staff (from Hq 1st Bn)
Detachment, 10th Signal Company
Detachment, medical company, 85th Infantry
Army aviation section
Provisional supply section, service company, 85th Infantry
Air control team with forward air controller

TEAM 1 (CAPTAIN, TANK COMPANY, COMMANDING)
Tank company (less 2 platoons)
2d platoon, Company A
One section, 81mm mortar platoon
One 57mm rifle squad
One 60mm mortar squad

TEAM 2 (CAPTAIN, COMPANY A, COMMANDING)
Company A (less 2 rifle platoons)
3d platoon, tank company
One 57mm rifle squad
One 60 mm mortar squad

TEAM 3 (LIEUTENANT, 3D PLATOON, COMMANDING)
3d platoon, Company A
4th platoon, tank company
One section, machinegun platoon
One 57mm rifle squad
One 60mm mortar squad

TEAM 4 (CAPTAIN, BATTERY A, COMMANDING)
Battery A, 25th Field Artillery Battalion
1st platoon, Battery A, 43d AAA (AW) Battalion
1st platoon, 85th Heavy Mortar Company

TEAM 5
Intelligence and reconnaissance platoon, 85th Infantry
One section, antitank platoon

TEAM 6
1st platoon, Company A, 41st Engineer Combat Battalion

To these six teams and to the task-force reserve (Team 7) he assigns the following missions:

TEAM 1: Seize objectives A and B in that order. Upon seizure of objective B, defend that position. On order, release to task-force control one tank platoon and one rifle squad to form Team 7.

TEAM 2: Prepare to assist in seizure of objectives A or B; on order, seize and defend objective C.

TEAM 3: Prepare to assist in seizure of objectives A or B; on order, seize and defend objective D.

TEAM 4: General support. Provide antiaircraft protection for column during movement and for artillery and mortar positions in objective area. Artillery and mortars support attack and defense of objective area from positions vicinity Zeubelreid.

TEAM 5: Reconnoiter flanks of column, two squads on right and one squad on left; contact elements 201st Armored Cavalry vicinity Leisten; on order patrol area between the Stein Bach and the town of Sommerhausen; contact elements II Corps vicinity Klein Ochsenfurt.

TEAM 6: Assist task-force advance on axis Morris; prepare to execute demolition missions in objective area as required; prepare and defend roadblocks X and Y.

ALL MANEUVER TEAMS: Prepare to assume missions of other teams in priority 1, 2, 3; or to assist other teams on order.

TEAM 7: On order, task-force reserve; organize, occupy and defend position A.

Initial formation is designated as column of teams, with order of march as follows: Team 1, command group, Team 2, Team 6, Team 4 (less AAA AW), headquarters ( - ) and Team 3.

Maj Morris has organized his force into teams to accomplish his mission. Three maneuver teams are required for quick seizure of the objectives. If fewer than three maneuver teams were organized, the attack probably would be slowed by the reorganization needed to continue the attack from one team objective to subsequent objectives. Three maneuver teams can seize the designated objectives and consolidate them, if the attack proceeds according to plan. The lead team, with two platoons of tanks and one Infantry platoon, and reinforced by other elements, should be capable of seizing both objectives assigned. If one of the maneuver teams lacks sufficient assault power to seize its objective, another team can be committed quickly to assist. Initially, the teams are as equal in capabilities as the number of available weapons and Infantry platoons permits. Any of the three teams can assume the mission of any of the other two without changes in organization. Such flexibility is especially desirable in this type of operation, since it is not known which team will arrive first at the objective area. Each of the three teams must be prepared to change its mission in an instant, and proceed without delay on its new mission.

Four principal terrain features must be organized and occupied, and this can best be accomplished by four teams for defense. Team 1 will be employed in the attack on objectives A and B, after which the team commander will release a portion of his team to task-force control for organization of objective A. The task-force commander will designate the force on objective A as Team 7. Since four teams would be needed to organize and occupy the defense areas, consideration was given to having the task force formed initially into four teams. This was rejected, however, since more than three teams would reduce the Infantry strength in two of the teams and lessen their effectiveness for the offensive mission.

The mobility of the teams enables them to shift quickly and to make necessary adjustments in the defense to counteract enemy action. This characteristic of the teams obviates major reorganization for the defense. In this situation, a reserve is provided by splitting the tank-heavy Team 1 to form an additional team; however, since major strength is needed in the forward areas, only a small force is retained in reserve. The speed required in this operation makes the attachment and detachment of units during the attack undesirable. If the defense, for any reason, is prolonged, further adjustments in the organization of the force may be made.

The 81mm mortar section is attached to Team 1 to provide readily available medium-range mortar fires for the lead team. Team 4 is the fire-support team. The task-force commander visualizes that all elements of Team 4 will be employed in a general-support role throughout the operation unless the lack of enemy air permits the attachment of AAA (AW) weapons for use in a ground-support mission. During the column movement, the antiaircraft automatic weapons will be spread throughout the column to provide adequate protection for the force.

Team 5 is reinforced by the attachment of the antitank section for protection during its flank-security mission. If this section is not needed to reinforce the team

in its patrol activity after reaching the objective area, it will be detached from Team 5 and employed in the defense of positions A, B and C.

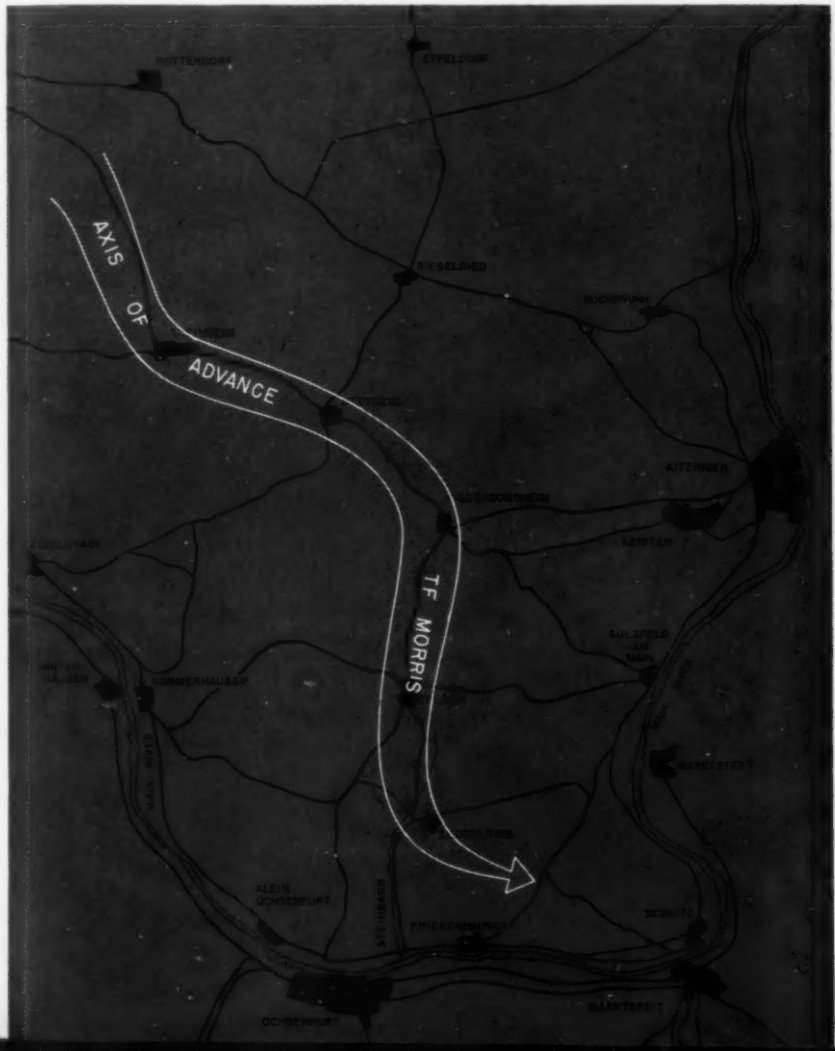
Team 6 has a primary mission of engineer support. It will perform its secondary mission by fighting as Infantry in the defense, if necessary.

Team 7 will constitute the task-force reserve in defense. It is located on a dominant terrain feature in the rear area. This team, and unengaged teams on other positions, may be employed to influence the action in the conduct of the defense by functioning in a blocking or reinforcing role or to counterattack.

Missions for the teams are specific but brief: each team has a necessary task to perform. The organization is based on what is necessary to seize and to hold. Resistance en route to the objective area is not expected to be heavy; however, if heavy resistance is encountered, it may become necessary to change the organization of the teams.

Even though a single axis (Figure 4)

**Figure 4. Axis of Task Force Morris.**



has been assigned by the regimental commander, Maj Morris considered moving in two columns, for this would facilitate reaching the objective area in minimum time. He decided, however, since the situation is extremely vague, to move in a single column to insure maximum flexibility. The march order adopted takes into consideration the mission and capabilities of each team. Team 1 leads the column, since it provides the force with greater strength to take care of any situation that may develop en route to the objective area. The command group follows this team so the force commander can more effectively control the action of the entire force. From this position he will have first-hand knowledge of the situation to the front. Team 2 is next in column, where it will be readily available for rapid commitment and can assist in the seizure of objective A or B if required. Team 6 follows Team 2 so it can be employed rapidly to assist the advance and can move to establish roadblocks in the objective area. Team 4, less the antiaircraft artillery, moves next in column, prepared to go into firing positions as required. The antiaircraft artillery is spread throughout the column, under control of the antiaircraft-artillery-platoon leader, to provide for column defense against enemy air. The headquarters and service elements move near the rear of the column for protection and to provide medical and maintenance support for the entire column. The rear guard, Team 3, protects the column during its move against enemy threats from the rear. When the objective is reached, deployment of the force will enable this team to move rapidly to objective D on order of the force commander.

Roads and trails in the area provide easy movement for the security force dispatched to the flanks. A lesser requirement for security exists on the left flank because of previous operations and presence of the 2d Battalion, 201st Armored Cavalry Regiment, in the Kitzingen area. Rapid movement envisaged for the force moving in column also will afford a degree of security by reducing the time in which the enemy can react to the thrust to the objective area.

The movement to the objective area was unopposed except for a well-defended roadblock just north of Kaltensondheim which was bypassed after being brought under fire. The objectives were secured after a brief but sharp fight in which an unsupported enemy rifle company was destroyed. Team 5 is now patrolling the riverline to the west of the force, while Team 6 is constructing roadblocks X and Y. Contact has been made with 2d Battalion, 201st Armored Cavalry. The disposition of the force at 171300 is as shown in Figure 5.

At 171310 an air observation post reports that three separate sightings of approximately company-size Aggressor units have been made in the area south and east of the river. The force south of Gnodstadt is reinforced by 10 tanks, and the force in vicinity of Marktsteft is known to have at least 18 armored personnel carriers and five tanks. Reconnaissance elements have been observed in the vicinity of Marktbreit and along Highway 2 between Marktbreit and Marktsteft.

Enemy fire against task-force positions begins to increase in intensity, particularly in the area of positions B and C. At 171320 Lieutenant, engineer platoon, reports that Aggressor is deploying along the river bank just north of Marktsteft and has begun shelling the area in vicinity of roadblock X. The squad manning roadblock X has withdrawn to positions about 300 yards west of the roadblock.

Maj Morris takes the following actions:

1. Requests air strikes on enemy col-

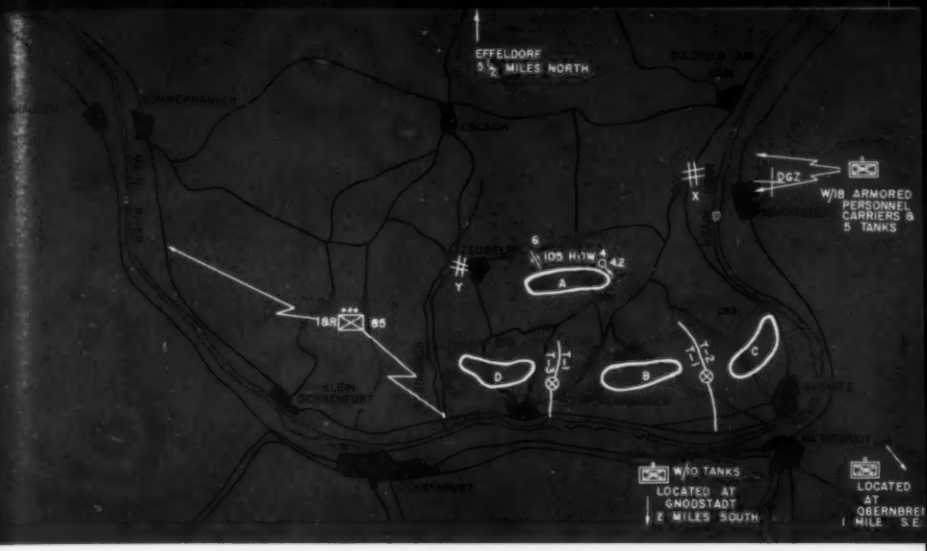



**Figure 5. Task Force Morris, 171300 September.**

umns vicinity Gnodstadt and Obernbreit.

2. Notifies Colonel, 85th Infantry, of the situation and requests a 10KT atomic weapon on enemy force vicinity Marktsteft: ground zero as indicated in Figure 5; gun delivered, low air, as soon as possible. Alerts Team 7 to be prepared to move to a blocking position vicinity roadblock X in case the weapon is not delivered or does not achieve the desired results.

3. Notifies commander, Team 4, to maintain maximum fires on targets at Obernbreit, Gnodstadt and Marktsteft.

4. Informs all teams of the situation and alerts them for possible redisposition to meet the threat from the northeast.

5. Advises Lieutenant Colonel, 2d Battalion, 201st Armored Cavalry, of the situation.

Indications are that Aggressor is going to attempt his crossing operations on a wide front in the salient of the river between Ochsenfurt and Marktsteft. Positive measures must be taken now to forestall this action and insure protection of the force in its present positions.

The enemy forces at Gnodstadt and Obernbreit pose a real threat to the accomplishment of the force mission; controlled air strikes on these columns will minimize their capability for further offensive action in closer proximity to the defensive positions.

The regimental commander is informed of the situation so he may keep abreast of enemy activities which may threaten the I Corps units advancing on Schweinfurt. If Aggressor elements in the vicinity of Marktsteft succeed in crossing, they are capable of threatening the force with an attack from the rear. This enemy force must be engaged as rapidly and as violently as possible. The fact that the enemy has armored personnel carriers in the area makes the use of at least a 10KT weapon desirable. Maximum reliance must be placed on all types of fire and delivery means to gain decisive results in minimum time.

Team 4 commander is notified to bring enemy targets to the south and southeast under fire to assist in fixing the enemy preparatory to the air strikes which have been requested.

All troops must be notified of the situation so that they may be protected at the

time of the atomic detonation and ready to assume new missions if necessary. As soon as the time on target of the atomic weapon is announced, this information will be disseminated through each echelon of the force.

The atomic weapon delivered on the enemy force in vicinity of Marktsteft produced excellent results; scattered troops have been sighted moving to the east and north out of the target area. Air reports good results in the strikes on the other two forces; the column near Obernbreit dispersed in the woods north and south of the town where napalm and rockets were employed against the remaining elements. Four tanks and approximately 100 Aggressor Infantry, the remainder of the force initially sighted near Gnodstadt, moved toward Ochsenfurt in a widely dispersed formation.

Defense and surveillance missions continued for the next few hours in the face of increasing enemy activity to the south. Another atomic weapon of 2KT yield was called for and detonated just southeast of Ochsenfurt at 1540 hours to destroy an estimated reinforced company in that area.

At 1600 hours a radio message is received from Lieutenant Colonel, 2d Battalion, 201st Armored Cavalry, to the effect that Aggressor has succeeded in reinforcing the bridgehead at Kitzingen. He further states that he will have trouble containing the enemy, and that he will probably have to withdraw to the north and west.

At the same time the II Corps units south of the Main River inform the task force commander that they have succeeded in breaking the enemy position in several places, have captured Ochsenfurt, and are now moving rapidly eastward. Once they have passed Marktbreit, they expect to swing to the north and destroy the enemy attacking between Marktbreit and Kitzingen.

Maj Morris gives this information to the regimental commander. Colonel, 85th Infantry, at this time tells him that the division has been committed in the attack to seize Schweinfurt. Maj Morris is directed to withdraw his force to the vicinity of Effeldorf where he will be given further orders.

Maj Morris takes the following measures to comply with the orders he has just received:

1. Orders Team 1 to occupy position A to protect withdrawal of the remainder of the task force from present areas and, on order, to withdraw through Erlach. Team 7 reverts to control of Team 1 in its present positions.

2. Orders Team 4 to place fire on enemy approaches to the river; to protect withdrawal by fires on near side of river; and, on order, to displace by echelon to position areas north of Erlach.

3. Orders Teams 3 and 2 to move to position areas east and west of Erlach and to establish positions to protect withdrawal of remainder of task force to the north.

4. Orders Team 5 to move immediately to Erlach; to contact elements 2d Battalion, 201st Armored Cavalry, vicinity Kitzingen; and to screen the east flank during withdrawal of the task force.

5. Orders Team 6 to withdraw immediately to Erlach, to be prepared to execute demolition missions and to establish blocks on routes of withdrawal as required.

6. Orders Team 7 to revert to control of Team 1 upon arrival of Team 1 on position A.

In ordering Team 1 to a position on commanding terrain in the rear central portion of the area, Maj Morris insures that maximum protection will be afforded to other units withdrawing on either flank.

Team 4 will interdict approaches to

the positions on the near side of the river to insure close protection for the task force in its withdrawal. It will displace by echelon with the remainder of the force, and be prepared to continue fire missions from new position areas.

From new positions east and west of Erlach, Teams 2 and 3 will be able to cover the withdrawal of the remainder of the task force from the Zeubelreid area. If there is no ground contact at the time the force clears through these positions, the task-force commander will cease the delaying action and retire, using the most direct route to the new area while maintaining tactical formation within the column.

The mission of Team 5 west of Stein Bach has been fulfilled. In view of the enemy threat to the withdrawal toward Effeldorf, Maj Morris needs to protect his right (east) flank. The reconnaissance unit is moved immediately to an area from which it can accomplish this mission on order of the task-force commander.

Team 6 is moved into Erlach prepared to execute missions which will impede any attack by Aggressor from the south or east. This team, or a portion of it, probably will move just ahead of the rear-guard team to be available for establishing obstacles along the route.

The mission of Team 7 as task-force reserve is no longer required. This team, when it reverts to control of Team 1, will enhance Team 1's capability of protecting the initial withdrawal. The subsequent movement of the entire force from the Erlach area will be facilitated by the reduction in the number of teams and by again having as much balance as possible within the teams.

This brief picture of one day's action of a battalion-size task force indicates what the future may hold in store. Operations under atomic conditions will require highly mobile teams of combined arms, capable of accomplishing many types of missions. In present organization, the formation of such a force may result in a decreased capability for the remainder of the unit not employed as part of the force. However, the training memorandum covering these organizations states that one of its purposes is to provide training for leaders at all echelons in the formation and employment of such forces on an atomic battlefield. As new organizations become standardized, the formation and employment of mobile forces will be commonplace—an inherent mission of larger units. As long as the task-force commander knows how to employ the tools at hand, and how to retain maximum flexibility in the tailoring of balanced teams within the force, he can successfully accomplish missions of short duration which have heretofore been assigned to much larger units.

**MAJ CHARLES D. FOLSOM received a commission in the reserve upon graduation from Oak Ridge Military Institute in 1939. He entered active service in 1941 and saw combat in World War II as a company commander with the 83d Infantry Division. He was wounded in Europe and evacuated to the United States. Four years later, after a brief return to civilian life, he received a regular commission and was assigned to the 1st Infantry Division in Germany, where he served in several command and staff jobs. His next assignment was with the G1 Section, Second U.S. Army, at Fort Meade. Overseas again, he joined the 25th Infantry Division in Korea, serving as battalion executive officer, battalion commander and assistant division chief of staff. Since 1954 he has been an instructor in the U.S. Army Infantry School's Tactical Department.**

# Infan

## DO YOU

***For if the trumpet give an uncertain sound, who shall prepare himself to the battle?***

I Corinthians, xiv, 8.

This is a period of profound change within the Army and the Infantry. Revisions in doctrine and techniques for future combat are the order of the day. The advent of nuclear power as a tool for war and other technological advances have brought and will continue to bring modifications in our organizations, weapons, equipment and tactics. The problem of keeping abreast of these changes and new developments is a staggering one for any officer or noncommissioned officer. In the Infantry where we must know so many more weapons and where leadership problems are so much more varied than those in some of the other branches, this problem is magnified. Yet, it is a problem we must face squarely — and solve.

The battlefield of the future will demand — more than ever before — strong leadership. We have heard and read much about abstract and elusive qualities which characterize the military leader and which our great commanders of the past have displayed. While there is never unanimity as to the most desirable attributes of the successful leader, there is general agreement that he must have *comprehensive knowledge of the job at hand.* This requirement may not be described in these precise words but it is ever present. Some have called it *technical mastery.* Our Chief of Staff, General Maxwell D. Taylor, describes it as *professional competence and ability.* Others have simply labeled it as *knowing your stuff.*

Regardless of the terminology, it is quite clear that *we must know our job.* Department of the Army Pamphlet Number 600-3, "Career Planning for

By MAJ GEN ARMISTEAD D. MEAD

# trymen!

## KNOW YOUR JOB?

Army Officers," concisely expresses the need in these words: "There is no type of human endeavor where it is so important that the leader understand all phases of his job as that of the profession of arms. A military commander is vested with a high degree of authority which extends into matters normally considered individual and personal. Everything concerning a soldier's existence, ability, potentiality, professional knowledge, as well as those matters which influence his personal life such as his food, clothing, comfort, promotion, and in time of war his very life, depends upon his commander's knowledge and appreciation of the importance of all phases of his work."

I need not belabor the point. We all recognize that knowing our job is a fundamental element of leadership and an absolute necessity in the successful training and functioning of the Army. It is a matter of utmost concern to every officer and noncommissioned officer. Yet, during numerous and widespread training inspections, staff visits and maneuver observations I have witnessed many Infantrymen who do not know what they are doing. I have followed the conduct of training tests and have studied the results. In many instances performance has been unsatisfactory. Some commanders fail to maintain control of their units and do not coordinate the employment of their supporting weapons. Other officers and noncommissioned officers, while supposedly supervising training, do not recognize or correct obvious errors in tactics and techniques.

I am not the only one to witness these shortcomings. Many senior officers, with whom I have talked, also have noted and commented on similar deficiencies. I am sure you have seen them yourself.

In spite of the problems we face we can never offer a reasonable or acceptable excuse for not knowing our job. Many of the things we need to know are basic—

they have not changed, they are not new. I am particularly disturbed whenever there is evidence that we lack knowledge of basic matters. These are things that can be acquired, with a little enterprise, by anyone who has the desire or proper motivation to do so. As an old First Sergeant of mine used to say, "You can excuse a man for being stupid 'cause he was born that way, but there's no excuse for a big belly hanging over a dirty waist belt!"

On the other hand, I realize that keeping up with voluminous changes and new developments can be difficult. But I repeat, we cannot make or accept excuses. We must find ways of acquiring the knowledge we need.

Admittedly, we have a problem. How are we going to solve it?

The first step, of course, as always, is command action. This is a step that must start at the top. If our subordinates do not know what they are doing we are at fault. We have with us, at all times, responsibility for the training and performance of those under us. If they fail to measure up, our own ability to command is questionable. We must assume this responsibility of command and see to it that our subordinates maintain professional competency.

It is of greatest importance that all leaders, especially field grade and higher, practice delegation of duties and foster initiative in their officers and men. We must give our subordinates jobs appropriate to their rank and then let them alone to work out the details. On the other hand, it is of equal importance that we know how to handle the job ourselves, at least well enough to supervise and check the subordinate's performance. The successful training and operation of the Army is hinged on this principle of delegation of duties and command supervision. If a commander lacks necessary knowledge or is dilatory in using it or if he looks at training with unseeing eyes, he does not belong in the chain of command.

An important adjunct to command action in solving this problem is our school system. It is reputedly the world's finest. Our own United States Army Infantry School is the foremost institution of its kind in existence. And, although none of our Infantry School courses is designed or expected to teach an officer *all* he needs to know about any particular subject, I am firmly convinced that the graduate of the Infantry School who goes directly to the duty for which he has been trained, does an acceptable job. The degree of acceptability will depend on the amount of time the individual devotes to

**Command supervision is this**

**. . . not this.**

study and further improvement of his knowledge after leaving the school. I am also convinced that the very many Infantry School graduates who go to branch immaterial assignments or duties other than those in which they have received training will soon forget much of the tactical and technical knowledge they have accumulated. The amount they forget or retain will depend directly on the amount of personal effort they put into keeping up with Infantry professional matters.

The surest solution to our problem will be provided by personal effort. Command action and schooling will help but they alone cannot correct all of our individual deficiencies. Each of us must devote a fair share of his own time to constant self-improvement. This is the only way we can maintain our professional competency.

How long has it been since you had a machinegun or a BAR home for the weekend? When did you last look into the manual to refresh yourself on tactics for the rifle platoon or the rifle company? How many of our training texts or official service magazines have you read in the past year?

I invite you to indulge in a bit of self-analysis. Ask yourself the question, "Do I really *know* my job—the one I am doing today and the one I may be called upon to do tomorrow?" Before you answer let me pose a few questions on a variety of subjects which should be well known to a good Infantryman:

1. What is the difference between concurrent and integrated training? What is the purpose of each?

2. What are the most common stoppages encountered when firing .30-caliber machineguns and the cause of each?

3. What does the term "basic load" mean in relation to a particular type of ammunition?

4. What are the duties of a coach in rifle marksmanship training? What should he do when his "pupil" fires outside the four ring?

5. What are the organic fire support weapons of the rifle platoon? Rifle company? Infantry regiment?

6. Under the Uniform Code of Military Justice what commander is author-

MAJ GEN ARMISTEAD D. MEAD was commissioned in the Infantry upon graduation from the United States Military Academy in 1924. Prior to World War II he served in Infantry assignments in the United States, the Philippines and Hawaii and was an instructor at The Infantry School. During the war he served in both the Pacific and European Theaters. Later, returning to The Infantry School, he was in turn director of the Staff and Tactical Departments. In Korea, he was assistant division commander of the 3d Infantry Division. After a tour as chief of staff, Third Army, he returned to the Far East and commanded the 1st Cavalry Division. In his present assignment as chief of Infantry, Headquarters, Continental Army Command, he is the foremost spokesman for the Infantry.

ized to reduce a corporal?

7. What are the four phases of the Army training cycle? What is the purpose of each phase?

8. What are the maximum and minimum ranges of the 81mm mortar? The 4.2-inch mortar?

9. What is the difference between a field exercise and a field maneuver?

10. What is the mission of the Infantry in the attack and defense?

11. How does one aline the weapons system of the 106mm Recoilless Rifle M-40 using the M-92D direct fire sight?

12. What is a National Match Grade M-1 Rifle?

13. What major requirements in tactical operations for Infantry units are necessitated by atomic warfare?

14. What are the principal radios in the rifle company? Infantry regiment?

15. How many men are in the rifle squad, rifle platoon, rifle company and battle group of the new Infantry division?

16. Where is second echelon maintenance performed on the vehicles of the rifle company?

17. What is the primary difference between the new Trainfire system of rifle marksmanship instruction and the instruction we have used in the past?

18. What weapons are the light weapons Infantryman trained to operate? The heavy weapons Infantryman?

19. What jobs are graduates of the Basic and Officers Candidate Courses at the United States Army Infantry School trained to fill?

20. What is the maximum weight of equipment normally carried by the Infantryman?

I do not consider that knowing the correct answers to these questions will necessarily enable you to say that you know your job or that they will qualify you as an Infantry commander. However, failure to know the correct answers should serve as an indicator that you're getting too far away from the Infantry!

The extensive evolution in doctrine and organization which lies ahead will create even greater demands for professional competency on the part of all Infantry leaders. These increased demands

must be met largely by study and self-education. If we devote adequate time to the needed self-improvement it will be reflected in sound planning and effective supervision of training. The troops will know that we *do* know our job. Most important of all, we will be ready for our real job—combat. So, as Infantrymen at the head of the column and on the right of the line, let's heed Paul the Apostle and insure that in the future our trumpets sound loud and clear!

## ANSWERS TO QUARTERLY QUIZ *(See page 45)*

***Possible score 100 points, expert 90-100, sharpshooter 70-80, marskman 50-60, recruit 30-40 and bolo 0-20. For detailed discussion of the answers check the references listed.***

1. Defensive measures include: shelter, damage-control plans and organization, dispersion of units and facilities, individual protection and counterreconnaissance and counterintelligence efforts to prevent the enemy from discovering lucrative targets. At higher echelons electronic countermeasures, deception, clandestine intelligence and destruction of enemy mass-destruction-weapons capabilities are employed. (Chap. 9, Sec. VI, Par. 299b, FM 100-5, September 1954.)
2. **No.** Section 9 of the Uniform Code of Military Justice, 5 May 1950, provides that any civil or criminal prosecution against a member of the armed services on account of an act done under color of his office may be removed for trial to the Federal District Court.
3. Integrated training is conducted in addition to and as a part of the scheduled subject and affects the entire unit at the same time. Subjects to be integrated should be related to, but not necessary to, the effective presentation of the scheduled subject. One or more subjects may be integrated; however, each subject must be planned. The subjects being integrated may be any in which the unit has shown weaknesses or in which a commander desires more emphasis. Additional instructors are not normally necessary. Personnel should have received previous instruction in the integrated subjects. An example of this type of training is the integration of a gas attack with a platoon advance-party exercise.

Concurrent training takes place simultaneously with the scheduled subject but affects only part of the unit at one given time. The subjects to be taught concurrently may either be related or unrelated to the scheduled subject and must be carefully planned and presented. This training normally requires additional instructors. It should not be used merely to keep troops busy but must serve a materially constructive purpose. Concurrent training may be used to introduce new subjects, for additional training in subjects previously presented, or for make-up periods for personnel who missed past instruction. An example: Training in the use of booby traps for personnel of a unit waiting to participate in a combat-in-cities problem.

Both integrated and concurrent training should be used whenever possible because they provide for maximum use of training time. (Part 3, Par. 39, Operations and Training Handbook, United States Army Infantry School. This material will be included in a revised edition of FM 21-5.)
4. A magnetic azimuth of 4 degrees. When magnetic north is *west* of grid

north, as in this situation, add the number of degrees in the declination diagram (the GM angle or 10 degrees in this case) to the grid azimuth to find the magnetic azimuth. (Chap. 3, Sec. III, Par. 50, FM 21-26, March 1956.)

5. To aline the weapons system make the axis of the 106mm bore (extended) and the telescopic line of sight parallel or convergent on some distant aiming point beyond the range to any likely target. After boresighting the 106mm rifle with the direct-fire sight, aline the spotting rifle with the system by zeroing at a range between 1000 and 1200 yards. (Chap. 6, Sec. V, Par. 144, FM 23-82, December 1955.)

6. **b.** The best locations for transmission and reception are hilltops, elevations or other slight rises in the ground. Flat, open terrain also is good. As a general rule transmission over water is better than over land. Valleys, depressions, densely wooded areas and low places are poor sites. When the set is installed in a vehicle it should be kept away from bridges, large buildings or trees and heavily traveled roads. Proper siting and proper antennas can be more effective in maintaining communication than increasing the power of the radio 10 or 20 times. (Sec. IV, Par. 29, Technical Bulletin SIG 223, March 1954. For additional information on getting maximum efficiency from Infantry radios see "Longer Range for Infantry Radios," *Infantry School Quarterly,* July 1956.)

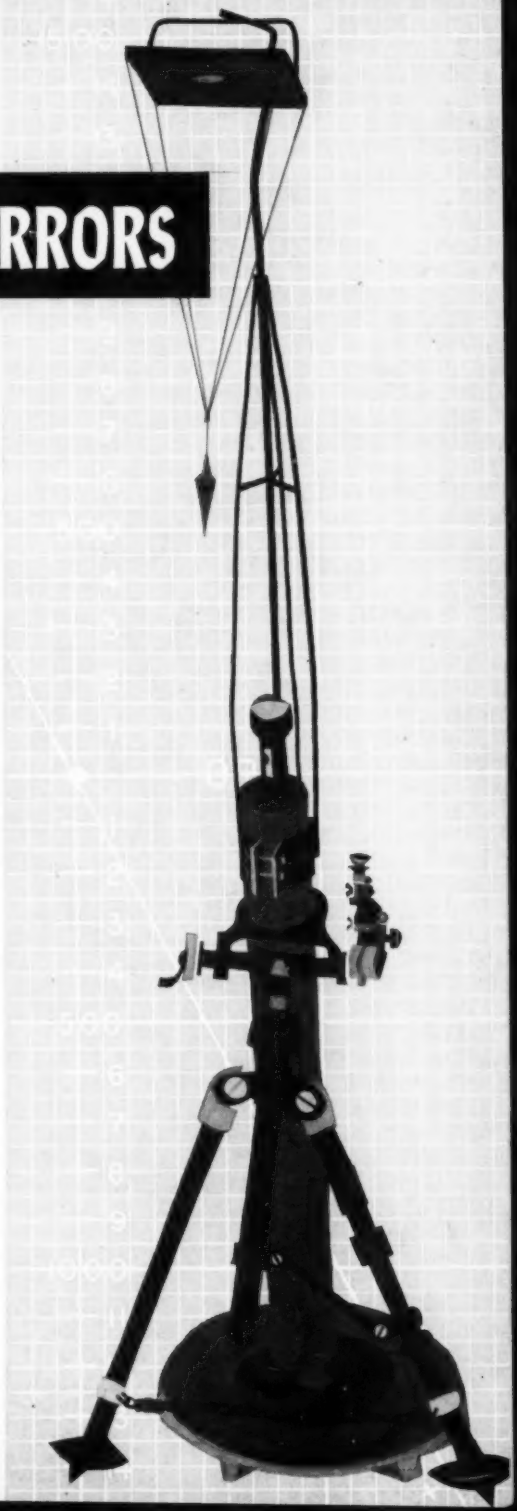
7. **a.** (Chap. 1, Sec. II, Par. 6a, TM 9-772A, April 1952.)

8. Intervals between strongpoints must be kept under observation to reduce the possibility of undetected enemy airborne attack, guerilla action or infiltration in such numbers as to threaten the integrity of the strongpoints or critical installations. The commander develops a detailed plan, based on the plan of higher headquarters, for the employment of all available means to provide adequate surveillance. Initially, he may emphasize the plan of surveillance forward of the battle position. He should, however, maintain a proper balance for the plans of surveillance within and forward of the battle position. The combat effectiveness of the strongpoints is maintained by avoiding the assignment of responsibilities for surveillance beyond the strongpoints' capabilities. Within his area of surveillance, a commander is charged with the all-inclusive responsibility of observing and reporting the presence of enemy forces. This may be accomplished through a combination of patrols, observation posts, patrol bases, listening posts and air reconnaissance. (Infantry School Reference Material, Tactics, Infantry Regiment, Chap. 2, Sec. V, Par. 10, April 1956.)

9. The basic load of ammunition is a fixed amount of ammunition authorized by the Department of the Army to be in the possession of a unit. It is that quantity of ammunition carried by the individual soldier, stowed in self-propelled weapons, carried in prime movers and in unit trains. The basic load is designed to enable a unit to enter combat and to sustain itself in combat until it can be resupplied. (Chap. 5, Sec. V, Par. 103, FM 101-10, September 1956.)

10. Realism. Although the fundamentals of shooting remain the same, Trainfire I uses a more realistic approach than conventional known-distance firing to train the combat rifleman. The purpose of Trainfire I is to teach a soldier to detect, engage and neutralize enemy personnel targets. To accomplish this purpose Trainfire uses target-detection ranges and increased field firing—both of which have a higher transfer value to actual combat firing than does the present KD firing. (Infantry School Instructors Guide for Trainfire I, Chap. 2, Par. 3, November 1956.)

# MORTARS & MIRRORS



The problem of making indoor mortar instruction profitable and interesting has been the subject of experimentation for many years. Inclement weather, economy and limited range facilities, particularly for reserve component units, have demanded the search for a practical means of teaching crew drill and mortar gunnery in a classroom. Such a means must be relatively simple and inexpensive, yet realistically provide practice in all procedures employed in actual firing on an outdoor range.

Many training aids have been devised for this purpose but, to date, none has quite solved the problem. They have been either too expensive or too complicated to be produced locally or too simple and unrealistic.

Like most mortarmen I have pondered this problem and, after many frustrating attempts, have developed a device for use with the M-29 81mm mortar which I believe meets all the requirements and provides the training means for which we have been searching. My associates at the United States Army Infantry School, where it has been tested, have named it the Bryant Mortar Training Device. With it, students can train in every phase of 81mm mortar gunnery, from crew drill to firing and they can do it indoors.

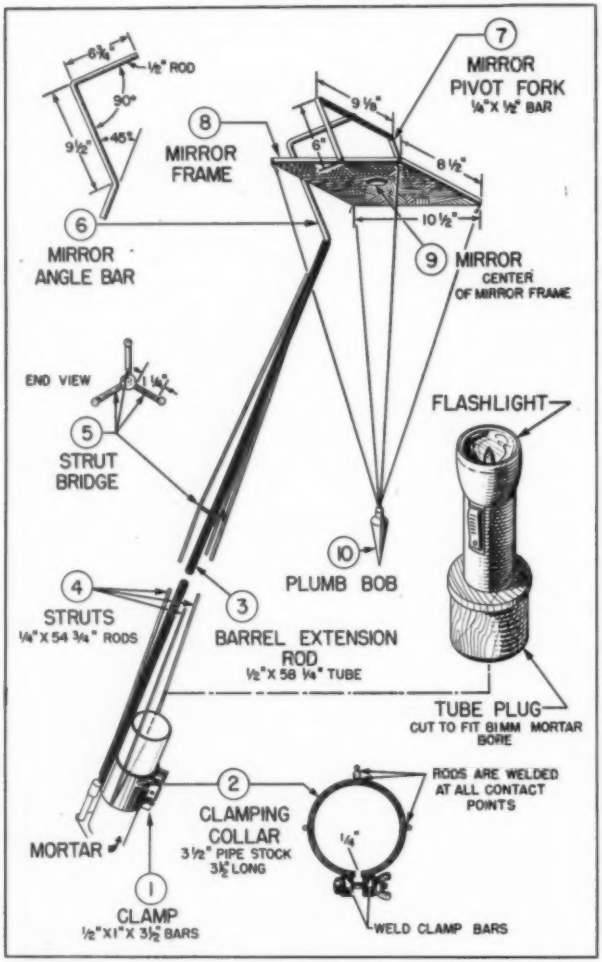
This device permits the mortar firing range to be brought indoors to a classroom where maximum instruction can

**By M/Sgt Charles L. Bryant**

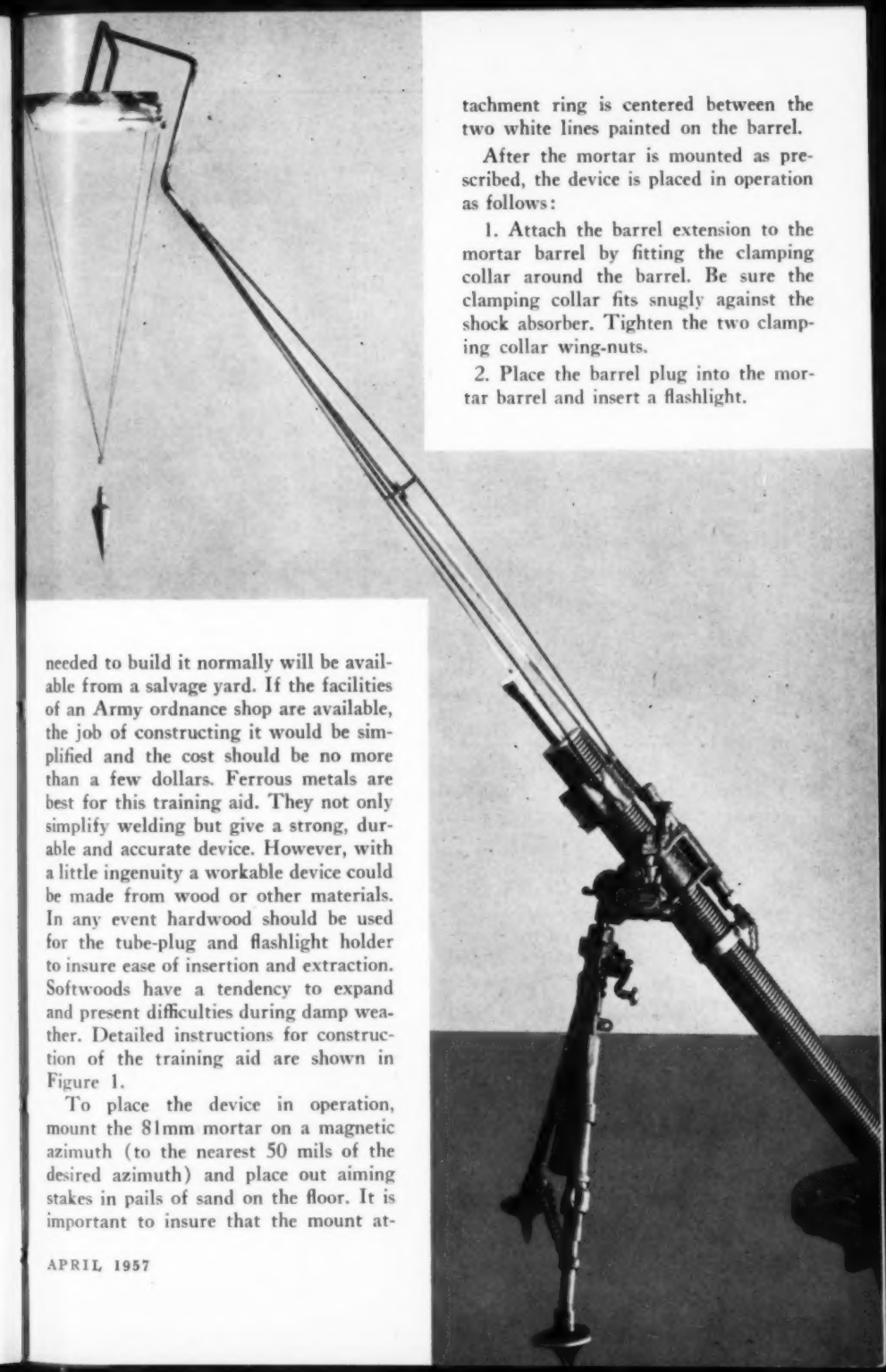
be given with a minimum of time, effort and expense. Inclement weather, the lack of facilities, ammunition or transportation or other bottlenecks to training need no longer hamper our mortar instruction. We can now go beyond the usual classroom or drill floor mechanical training and crew drill. Use of this aid extends the scope of indoor training to include instruction in the target-grid method of fire control with the M-10 plotting board, the conduct of fire, and forward observation procedures with visible target registrations. These capabilities make the device an ideal aid for National Guard or Reserve units. But it can also be an asset to any Army mortar unit to supplement range work.

Construction of the device is inexpensive and relatively simple. The materials

**Figure 1. Construction details.**




(1) CLAMP: Two 3½" pieces of ½x1" flat steel bar. Drill ½" bolt holes 1" from each end. Weld bars flush to lips of clamping collar. Wingnuts on ¼" bolts permit band tightening. (2) CLAMPING COLLAR: 3½" pieces of 1¼x3½" pipe. Cut ¼" slot for lip-gap. (3) BARREL EXTENSION ROD: A 58¼" length of ½" tubing. Weld to clamping collar opposite the collar lip-gap. (4) STRUTS: 3 steel rods ¼x54¾". Weld one strut on top of barrel extension rod at clamping collar; weld others on clamping collar at 3 and 9 o'clock. (5) STRUT BRIDGE: 3 bars of ¼x1¼" stock. Weld to barrel extension rod and struts at center of rod. (6) MIRROR ANGLE BAR: A 19¼"-long ⅛" solid steel rod. Insert 3" (depth of first angle) into barrel extension rod tube. Weld joint after getting proper angles in angle bar. (7) MIRROR PIVOT FORK: A 21½x ¼x½" steel bar. Bend 6" from each end to form "U". Drill ⅜" pivot hole ½" from each end. (8) MIRROR FRAME: An 8½x 10½x¾" piece of board or plywood. Frame by banding with heavy gauge sheetmetal strip. Strip should be ⅛" to ¾" wider than thickness of board to permit lapping on both sides. Center pivot holes on 10½" sides. Insert pivots through pivot fork and frame. Weld against metal band. Pierce corners of frame with ⅛" holes for plumb-bob attachment. Paint all surfaces flat black to reduce reflections. (9) MIRROR: Cement or tack a circular mirror to center of frame. (10) PLUMB-BOB: Must be heavy enough to keep mirror frame horizontal. Fishhooks (barbs removed) can be used to attach four cords to mirror frame. TUBE-PLUG: Make from hardwood to minimize swelling. Size of flashlight hole depends on type of flashlight. A 3- or 4-cell flashlight is best for strong light output and sharper reflection on target area.



needed to build it normally will be available from a salvage yard. If the facilities of an Army ordnance shop are available, the job of constructing it would be simplified and the cost should be no more than a few dollars. Ferrous metals are best for this training aid. They not only simplify welding but give a strong, durable and accurate device. However, with a little ingenuity a workable device could be made from wood or other materials. In any event hardwood should be used for the tube-plug and flashlight holder to insure ease of insertion and extraction. Softwoods have a tendency to expand and present difficulties during damp weather. Detailed instructions for construction of the training aid are shown in Figure 1.

To place the device in operation, mount the 81mm mortar on a magnetic azimuth (to the nearest 50 mils of the desired azimuth) and place out aiming stakes in pails of sand on the floor. It is important to insure that the mount attachment ring is centered between the two white lines painted on the barrel.

After the mortar is mounted as prescribed, the device is placed in operation as follows:

1. Attach the barrel extension to the mortar barrel by fitting the clamping collar around the barrel. Be sure the clamping collar fits snugly against the shock absorber. Tighten the two clamping collar wing-nuts.

2. Place the barrel plug into the mortar barrel and insert a flashlight.

**FIRING TABLE**
**BRYANT MORTAR TRAINING DEVICE**

| Range | Charge | Elev. | Range | Charge | Elev. |
|---|---|---|---|---|---|
| 800 | 1 | 1367 | 1500 | 2 | 1168 |
| 825 | 1 | 1360 | 1525 | 3 | 1160 |
| 850 | 1 | 1355 | 1550 | 3 | 1154 |
| 875 | 1 | 1346 | 1575 | 3 | 1146 |
| 900 | 1 | 1340 | 1600 | 3 | 1138 |
| 925 | 1 | 1332 | 1625 | 3 | 1132 |
| 950 | 1 | 1325 | 1650 | 3 | 1125 |
| 975 | 1 | 1318 | 1675 | 3 | 1118 |
| 1000 | 1 | 1311 | 1700 | 3 | 1108 |
| 1025 | 2 | 1304 | 1725 | 3 | 1101 |
| 1050 | 2 | 1296 | 1750 | 3 | 1094 |
| 1075 | 2 | 1290 | 1775 | 3 | 1085 |
| 1100 | 2 | 1283 | 1800 | 3 | 1080 |
| 1125 | 2 | 1278 | 1825 | 3 | 1068 |
| 1150 | 2 | 1268 | 1850 | 3 | 1066 |
| 1175 | 2 | 1260 | 1875 | 3 | 1058 |
| 1200 | 2 | 1254 | 1900 | 3 | 1047 |
| 1225 | 2 | 1248 | 1925 | 3 | 1042 |
| 1250 | 2 | 1241 | 1950 | 3 | 1034 |
| 1275 | 2 | 1233 | 1975 | 3 | 1024 |
| 1300 | 2 | 1226 | 2000 | 3 | 1018 |
| 1325 | 2 | 1220 | 2025 | 4 | 1012 |
| 1350 | 2 | 1212 | 2050 | 4 | 1004 |
| 1375 | 2 | 1205 | 2075 | 4 | 0992 |
| 1400 | 2 | 1198 | 2100 | 4 | 0984 |
| 1425 | 2 | 1192 | 2125 | 4 | 0980 |
| 1450 | 2 | 1184 | 2150 | 4 | 0970 |
| 1475 | 2 | 1174 | 2175 | 4 | 0960 |
| | | | 2200 | 4 | 0950 |

**Figure 2. Firing table.**

3. Attach the plumb-bob to the mirror frame by engaging the hooks in the four corner holes.

The device is now ready for operation. Various small objects, such as match boxes, flashlight batteries, etc., may be used to simulate targets on the floor in front of the mortar. A scale of 6/3600 (6 inches equal 100 yards) is used to construct the target area.

To operate the device, the forward observer is positioned to the right or left of the mortar at a minimum distance of ten feet from the target. If he is positioned any closer than this, it becomes difficult to focus binoculars. A screen may be placed in front of the mortar so that the gun crew cannot see the target area.

Assuming that the distance from the forward observer to the target is ten feet, and a range scale of six inches equal one-hundred yards is being used, this would make the observer target range 2000 yards. The FO determines the azimuth to the target and formulates an initial fire request which he transmits to the Fire Direction Center.

When the FDC receives this request, the computer formulates an initial fire command. He determines his firing data from the M-10 plotting board. A special firing table (Figure 2) must be used for elevation to obtain the proper range. The firing table contains a simulated charge element. This can be used or omitted in the fire command.

The gunner then receives the initial

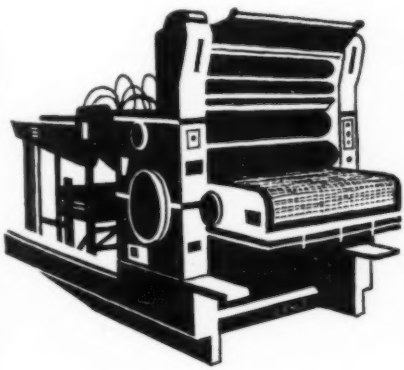
fire command from the FDC, places the announced deflection and elevation on the sight and lays the mortar accurately on the aiming stakes. The gunner fires the round by turning on the flashlight and announcing, "On the way." A beam of light from the flashlight will be reflected from the mirror downward to the target area at distances that vary according to the angle of mortar elevation. Normal gunnery procedures are then followed to adjust fire.

To make range corrections the forward observer uses the scale that has been established (six inches equal 100 yards). To make deviation corrections, the FO uses the mil scale in his binoculars and then converts mils to yards using the mil-relation formula (WORM formula). The range factor used in the mil-relation formula is determined by the scale.

It is readily apparent that this device allows the entire mortar platoon to be trained indoors, utilizing TOE equipment. Communications may be set up and the FDC moved into another room to add realism to the operation. All three units of the indirect fire team can be trained at the same time. Personnel should be rotated so that the entire unit receives instruction and practice in all phases of the training.

**M/SGT CHARLES L. BRYANT began his military career in the Marine Corps in 1942. While in the Pacific Theater he learned the value of mortars in the hands of well-trained gunners—both our own and the Japanese. Since that time he has enlisted in the Army and has become an expert in 81mm-mortar gunnery. Sgt Bryant is applying his knowledge and experience to the instruction of future mortarmen as an assistant instructor with the Weapons Department of the United States Army Infantry School.**

## THE PRESSES ARE WAITING



. . . for an article from you. If you have ideas or information that will help other Infantrymen, let us know about them. If your article would be interesting and useful to our thousands of readers, we'll get those presses rolling. And we'll pay you for accepted material. Write: Editor, *Infantry*, Editorial and Pictorial Office, United States Army Infantry School, Fort Benning, Ga.

# KNOWN? KNOWN INDEED!

*A* QUARTERLY *reader throws light on an old Infantry School article.*

Recently, while doing some research for my own satisfaction on the German General Ludendorff, I came across, quite by accident, information[1] which throws new light on an article published in the April 1947 issue of *The Mailing List,* predecessor of *Infantry.*

*The Mailing List* article, "The Principles of War," uses the battle of Tannenberg to illustrate the theory of unity of command. In that battle, Russian General Samsonov's Southern Army was encircled by the Germans and slaughtered. His pleas for help to the Russian Northern Army under General Rennenkampf were not answered.

The unnamed author of *The Mailing List* article says, "Had Rennenkampf known of the situation . . . and then failed to cooperate, he would have been guilty of criminal neglect of duty."

Known? Known indeed! Rennenkampf did know! Samsonov's plight was one for which he had been waiting for years!

This battle was lost ten years earlier in Mukden Station when Samsonov smashed his fist into Rennenkampf's face before two trainloads of their troops. The two generals, rivals from the same military academy, were bitter enemies from that day forth.

By chance, the Mukden brawl of Samsonov and Rennenkampf was witnessed by a German military observer and later related to a fellow officer, Captain Max Hoffman. This same Max Hoffman was Chief of Operations for Ludendorff at the time of the battle of Tannenberg. Having kept up with the Samsonov-Rennenkampf feud, he presented a plan, based on this knowledge, to attack and defeat Samsonov's army while it was separated from Rennenkampf by the waters and vast marshes of the Masurian Lakes. Hindenburg and Ludendorff bought the plan, although they did not know of the feud. At a crucial point in the battle, Ludendorff wanted to withdraw his forces because he was sure that Rennenkampf would hit his unprotected flank. It was then that Hoffman shared his secret. He was backed by Hindenburg and the gamble that Rennenkampf would not move was allowed to continue to ultimate, brilliant victory—a victory that soon saw the destruction of Rennenkampf's army as well.

Since *The Mailing List* author apparently did not have the benefit of this "inside story," I would like to set the record straight—particularly in view of the ultimate significance of this great battle. Tannenberg became a legend—a myth—that carried Ludendorff to the military dictatorship of Germany (1916-1918) and put him in a position to send Lenin to Russia—the consequences of which we are living with today. Had the Germans not won this battle, Lenin most probably would have rotted in Switzerland, an infamous revolutionary. By the same token, Hindenburg, who became a national hero as the result of Tannenberg, might not have become president of Germany. Instead, he probably would have died a somewhat obscure general. While Hindenburg actually signed Germany's death warrant when he handed over control of the country to Hitler, this did not become fact until we had dealt with Der Fuehrer, at a tremendous cost, in World War II.

ROBERT A. DETWILER
Harrisburg, Pa.

[1] *Wooden Titan: Hindenburg in Twenty Years of German History, 1914-1934,* by John W. Wheeler-Bennett, William Morrow and Company, New York, (1936).

# CHECKLISTS for Infantry leaders

*This is the fifth in the U.S. Army Infantry School series of checklists for small-unit leaders. These lists are for current TOE organizations. Many of the checklists will require revision for new Infantry units organized under the ROCID program. We repeat our word of caution on checklists. They are not inflexible rules but guides that should be modified to fit the situation. Use them to check your thinking and free your mind for other considerations.—Editor.*

## WEAPONS UNITS IN DEFENSE

### Weapons Platoon Leader

1. After receiving the company commander's warning order—

a. Issues a warning order to his subordinates.

b. Accompanies company commander to receive battalion defense order.

c. Accompanies the company commander on his reconnaissance.

d. Makes recommendations to the company commander for the employment of the weapons platoon.

e. Selects specific personnel to accompany him to receive the company defense order.

f. Plans the use of available time to insure that sufficient time remains to employ the sections of the platoon.

g. Begins his estimate of the situation, analyzes the terrain within the company area of responsibility and considers available information of the enemy.

h. Arranges to move the platoon and to issue the order.

2. After receiving the company defense order—

a. Coordinates with other leaders of fire-support units in the company area.

b. Coordinates with rifle platoon leaders.

3. To prepare the platoon for the defense—

a. Orients his section leaders on the terrain.

b. Issues the platoon defense order, including—

(1) Information of enemy and friendly forces.

(2) Attachments and detachments.

(3) Tasks for each squad or section, depending on their employment.

(4) Priorities for work in preparing position.

(5) Administrative and logistical matters.

(6) Command and signal matters.

c. Announces his location during conduct of defense.

4. Takes section leaders over area previously reconnoitered and—

a. Assigns the general location of the sectors of fire for the mortar squads.

b. Tells each section leader the requirements of the company and battalion preliminary fire plans and assigns one barrage for each mortar.

c. Designates the general location for the squads of 57mm rifle section and assigns each squad a principal direction of fire in accordance with the company preliminary fire support plan.

d. Insures that security is provided for the sections of the platoon.

e. Insures that ammunition resupply responsibilities are assigned.

5. Supervises preparations for the defense by—

a. Insuring that squad orders are issued correctly and, by questioning the members of the platoon, making certain that each member understands the orders.

b. Insuring that communications are established as required within the platoon.

c. Assigning specific duties to his command-group personnel to assist in the employment of the platoon.

d. Making certain that the mortars are capable of firing their assigned sectors and barrages.

e. Insuring that the mortars are located where they have good routes of communication, dispersion, mask clearance, defilade, and can receive protection from a rifle platoon.

f. Making certain that ammunition is stockpiled on the position.

g. Insuring that camouflage of the position is maintained.

h. Checking the range cards of the 60mm mortars and 57mm rifles.

i. Insuring that sufficient observation posts are organized for complete coverage of the company front and that communication with the observation posts is established.

j. Checking the 57mm rifle positions to insure their correct location and proper organization.

k. Assisting the company commander in receiving rifle platoon fire plans, integrating them into the company preliminary fire-support plan, and forwarding the final plan to the battalion fire-support center.

l. Assisting the company commander in transmitting the information contained in the battalion fire-support plan to platoon leaders and subordinates.

6. During the conduct of the defense—

a. Remains with the company commander to keep him advised on employment of the platoon.

b. Establishes priorities of fires; controls and directs the massing of the platoon's fires on the most dangerous targets as directed by the company commander.

c. Keeps the company commander advised on the effectiveness of the weapons platoon.

d. Maintains communication with his subordinate leaders and keeps them informed of the situation.

e. Checks on ammunition expenditures and requirements, casualties, and the amount of reorganization required as the fighting progresses.

## Weapons Squad Leader

1. After receiving the platoon leader's warning order—

a. Issues a warning order to the squad.

b. Accompanies the platoon leader to hear the company defense order.

c. Accompanies the platoon leader on reconnaissance.

d. Plans positions for the squad's machinegun teams according to the battalion preliminary fire plan and locations of avenues of approach, and makes recommendations to the platoon leader for their employment.

e. Reconnoiters the recommended positions and walks final protective lines to determine the location of gaps.

2. After receiving the platoon leader's order—

a. Begins his troop-leading steps.

b. Coordinates with the rifle squad leader in whose area the machineguns are placed.

c. Moves the squad into position.

3. To prepare the squad for the defense—

a. Orients squad members on the terrain.

b. Issues the squad defense order, including—

(1) Information of the enemy and friendly forces.

(2) Mission of the squad.

(3) Tasks for each member of the squad.

(4) Administrative and logistical matters.

(5) Command and signal matters.

c. Assigns exact locations on the ground for machinegun teams and ammunition bearers.

d. Informs machinegun-team leaders about the final protective lines and the sectors of fire assigned by the platoon leader.

e. Directs the gunners to mount their guns in position and to verify their final protective lines and sectors of fire.

f. Coordinates with the rifle squad leader when assigning sectors of fire for the ammunition bearers and providing security for the weapons.

g. Designates certain members of each machinegun team to remain with the guns to insure security and readiness to fire.

h. Directs the organization of the position according to the priorities established in the platoon order.

i. Plans to locate himself where he can control fires of both guns, if possible.

4. Supervises preparations for the defense by—

a. Insuring that all members of the squad understand the details of the order.

b. Coordinating with platoon leader to insure that the sectors of fire assigned and final protective lines tie in with the fire plan.

c. Checking the work being done on the ground to insure maintenance of camouflage and continuous improvement of the position.

d. Checking that the work being done on the construction of emplacements and fields of fire is effective and coordinated.

e. Insuring that all members of the squad know the challenge and password.

f. Supervising the preparation of range cards.

g. Insuring that he can maintain communication with the platoon leader.

h. Insuring that ammunition is distributed and stockpiled on the position.

5. In the conduct of the defense—

a. Maintains observation to front and notifies the platoon leader of any enemy activity observed.

b. Gives timely warning of the approach of the enemy.

c. Maintains fire discipline based on platoon leader's orders.

d. Directs the fires of the machineguns on the enemy.

e. Joins in the final protective fires on order from the platoon leader.

f. Keeps the platoon leader informed about casualties and ammunition supply.

g. Keeps his subordinates informed of the situation.

## Antitank Platoon Leader

1. After being notified to meet the company commander to receive the reconnaissance order—

a. Notifies personnel to accompany him on reconnaissance.

b. Alerts the platoon to begin preparations for the defense.

2. After receiving the reconnaissance order—

a. Plans the time available for reconnaissance.

b. Plans his reconnaissance by—

(1) Studying the terrain from a map, sketch or aerial photo looking for—

(a) Avenues of enemy armor approach.

(b) Section firing-position areas.

(2) Making an estimate of the situation.

c. Arranges for moving the platoon (where, when, how).

d. Makes his reconnaissance (selects routes, a time schedule, persons to take along, and decides how to use subordinates).

3. While on reconnaissance prepares recommendations for the company commander on—

a. Method of utilization—

(1) Can the fires of the platoon best be controlled by the battalion commander?

(2) Can the fires of the platoon best be controlled by the platoon leader or section leaders?

(3) Can the fires of the platoon best be controlled by the rifle company commanders?

b. Selection of firing-position areas for each section—

(1) Fields of fire.

(2) Observation.

(3) Cover and concealment.

(4) Routes into position.

(5) Room for dispersion.

(6) Security.

(7) Alternate and supplementary positions.

4. After completing his reconnaissance arranges for—

a. Issuing the platoon defense order (when, where, to whom).

b. Coordination with leaders of other supporting units and commanders of units in whose areas the guns are located.

5. After receiving the heavy weapons company defense order—

a. Completes the platoon defense plan.

b. Completes his reconnaissance.

c. Prepares his order.

d. Issues the platoon defense order to key personnel, including in it the—

(1) Method of utilization for each section.

(2) Section firing-position areas.

(3) Fire-control instructions.

(4) Plan for ammunition resupply.

(5) Limitations imposed by ammunition supply.

e. Submits a sketch or overlay to company commander showing the—

(1) Section firing positions.

(2) Principal direction of fire for each section.

6. During the conduct of the defense—

a. Locates himself where he can best control his platoon.

b. Keeps the heavy weapons company commander informed.

c. Keeps his subordinates informed of the situation.

d. Supervises the platoon's—

(1) Ammunition resupply.

(2) Conduct of fire.

## 81mm Mortar Platoon Leader

1. After being notified to meet the company commander to receive the reconnaissance order—

a. Notifies personnel to accompany him on reconnaissance.

b. Alerts the platoon to begin preparing for the defense.

2. After receiving the reconnaissance order—

a. Plans the time available for reconnaissance.

b. Plans his reconnaissance by—

(1) Studying the terrain from a map, sketch or aerial photo looking for firing-position areas.

(2) Making an estimate of the situation.

c. Arranges for moving the platoon (where, when, how).

d. Makes his reconnaissance (selects routes, time schedule, persons to take along, and decides how to use subordinates).

3. While on reconnaissance prepares recommendations for the company commander on—

a. Method of utilization—

(1) Can the fires of the platoon best be controlled by the battalion commander?

(2) Can the fires of the platoon best be controlled by the platoon leader or section leaders?

(3) Can the fires of the platoon best be controlled by the rifle company commanders?

b. Selection of firing positions—

(1) Defilade.

(2) Located near the center of sector.

(3) At or beyond minimum range from the forward edge of the battle position.

(4) Mask and overhead clearance.

(5) Good routes into the position.

(6) Room for dispersion.

(7) Security.

(8) Alternate and supplementary positions.

c. Location of platoon observation post—

(1) Is there good observation of the battalion sector?

(2) Is there cover and concealment?

(3) Is it near the battalion observation post?

4. After completing his reconnaissance arranges for—

a. Issuing the platoon defense order (when, where, to whom).

b. Coordination with leaders of other supporting units and the commander of the unit in whose area the mortars are located.

5. After receiving the heavy weapons company defense order—

a. Completes the platoon defense plan.

b. Assigns final observation parties to the rifle companies.

c. Completes his reconnaissance.

d. Prepares his order.

e. Issues the platoon defense order to key personnel, including in it the—

(1) Method of utilization for each section.

(2) Firing-position area(s).

(3) Fire control instructions, including—

(a) Registration of concentrations and barrages.

(b) Location of platoon fire-direction center.

(4) Plan for ammunition resupply.

(5) Limitations imposed by ammunition supply.

f. Submits a sketch or overlay to the company commander showing the—

(1) Mortar position(s).

(2) Location of assigned barrages.

(3) Location of concentrations the platoon is capable of firing.

6. During the conduct of the defense—

a. Locates himself where he can best control his platoon.

b. Keeps the heavy weapons company commander informed.

c. Keeps his subordinates informed of the situation.

d. Supervises the platoon's—

(1) Ammunition resupply.

(2) Conduct of fire.

## Machinegun Platoon Leader

1. After being notified to meet the company commander to receive the reconnaissance order—

a. Notifies personnel to accompany him on reconnaissance.

b. Alerts the platoon to begin preparations for the defense.

2. After receiving the reconnaissance order—

a. Plans the time available for reconnaissance.

b. Plans his reconnaissance by—

(1) Studying the terrain from a map, sketch or aerial photo looking for firing-position areas.

(2) Making an estimate of the situation.

c. Arranges for moving the platoon (where, when, how).

d. Makes his reconnaissance (selects routes, a time schedule, persons to take along, and decides how to use subordinates).

3. While on reconnaissance prepares recommendations for the company commander on—

a. Method of utilization—

(1) Can the fires of the platoon best be controlled by the battalion commander?

(2) Can the fires of the platoon best be controlled by the platoon leader or section leaders?

(3) Can the fires of the platoon best be controlled by the rifle company commanders?

b. Selection of firing-position areas for each squad—

(1) Fields of fire.

(2) Observation.

(3) Cover and concealment.

(4) Routes into position.

(5) Room for dispersion.

(6) Security.

(7) Alternate and supplementary positions.

4. After completing his reconnaissance arranges for—

a. Issuing the platoon defense order. (when, where, to whom).

b. Coordination with leaders of other supporting units and commanders of units in whose areas his guns are located.

5. After receiving the heavy weapons company defense order—

a. Completes the platoon defense plan.

b. Completes his reconnaissance.

c. Prepares the order.

d. Issues the platoon defense order to key personnel, including in it the—

(1) Method of utilization for each section.

(2) Squad firing positions.

(3) Fire control instructions.

(4) Plan for ammunition resupply.

(5) Limitations imposed by ammunition supply.

e. Submits a sketch or overlay to the company commander showing the—

(1) Squad firing positions.

(2) Final protective line and sectors of fire for each squad.

6. During the conduct of the defense—

a. Locates himself where he can best control his platoon.

b. Keeps the heavy weapons company commander informed.

c. Keeps his subordinates informed of the situation.

d. Supervises the platoon's—

(1) Ammunition resupply.

(2) Conduct of fire.

# WHAT'S NEW FOR INFANTRYMEN

## APPROVED

### School's Name Changed

A new Army policy to assure units are readily identified as part of the United States Army has effected a change in name for several Fort Benning installations. The Infantry Center and The Infantry School have been officially designated United States Army Infantry Center (USAIC) and United States Army Infantry School (USAIS). The Third Army Food Service School has been retitled the Third United States Army Food Service School.

### Department Change

The Automotive Department, United States Army Infantry School, has been changed to Ground Mobility Department. Instruction in the department will be revised to emphasize the training of leaders in the production of ground mobility with the mechanical means available. This will be in addition to the training of the specialist in maintenance. Emphasis on mobility is designed to give the Infantry leader the first ingredient in the formula: Mobility + Firepower + Communication = Superior Force at Point of Decision.

### Instruction on New Division

Changes are being introduced in instruction at the United States Army Infantry School for the new Infantry division which is being organized under the recently announced ROCID program. When the new organization is implemented, there will be no Infantry battalion. Battalion-level instruction will then be given only for the Armored-Infantry battalion, tank battalion and Armored-Cavalry battalion.

In the new organization, the rifle company is a larger unit possessing greater combat power and increased capabilities. Additional instruction at company level will be required. Reduction in time currently devoted to battalion level will permit this increase.

More attention also must be given to the duties and responsibilities of the battle group commander and his staff officers. Current concepts call for greater dispersion between battle groups and more frequent operations of an independent and semi-independent nature.

The new organization will require instruction in the employment of the brigade headquarters to familiarize the advanced-level student with:

1. Responsibilities of the battle group staff officer when the battle group is functioning as a part of the brigade.
2. Differences encountered when the battle group functions directly under division.
3. Differences encountered when the battle group functions tactically under the brigade headquarters and logistically under the division.

## DEVELOPED

### Face Shield

A new face shield for use by troops or others required to work in extremely cold climates has been developed by the Corps of Engineers Research and Development Laboratories, Fort Belvoir, Virginia. The shield is not clouded by

105mm Mortar.

the condensed moisture of respiration, and incorporates an improved, readily adjustable mounting, permitting it to be rotated upward 90 degrees when not needed. The main shield and inner apron are made of transparent plastic. The head harness can be adjusted to size.

### Little John Rocket

A new rocket, the Little John (XM-47), has been developed for the Army. The 318mm missile, which is about 12 feet long, was designed as a small-caliber, lightweight field artillery free rocket. Little John will provide the field commander with highly mobile fire support of increased effectiveness. It will be built at Redstone Arsenal, Alabama.

### Heavy Mortar

The newly developed 105mm mortar T33E3 is a smoothbore weapon having greater range and improved accuracy over the preceding heavy mortars. This weapon will permit greater traverse without displacement and, although lighter in weight, offers improved stability and ruggedness. The 105mm mortar, in the field artillery role, will supplement the light howitzer by providing an initial volume of area fire. The capability of the light howitzer will be augmented by the provision of very high angle fire to reach over obstacles and by the immediate response possible by close association of this weapon with the supported unit.

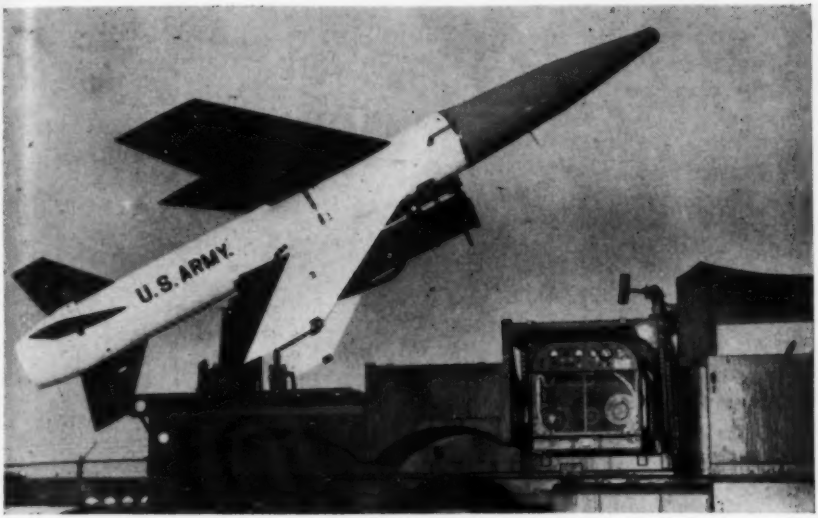
### Lightweight Automatic Rifle

A newly developed lightweight automatic rifle, designated the AR-10, will be tested by the Army. The AR-10 weighs 6.85 pounds, has an aluminum barrel of special alloy, with a stainless steel liner, and a stainless steel, 20-round clip. The stock is made of feather-weight Fiberglas and plastic foam, with a rubber butt plate. It is manufactured by the Fairchild Engine and Airplane Corp., which has just entered the arms field with a series of lightweight, corrosion-resistant firearms. Another weapon in the new line is the AR-5, a 30½-inch survival rifle that breaks down into a 14-inch, two-and-a-quarter-pound package with storage of the barrel and action in the Fiberglas and foam stock. It will float if dropped into water. The Air Force has adopted this rifle as its standard survival weapon, according to the manufacturer.

### Nike-Hercules

The Army's latest announced surface-to-air guided missile, Nike-Hercules, is undergoing final tests. It has several times the destructive force of the Nike-Ajax, which it was designed to replace in

Little John.




**Lacrosse.**

antiaircraft installations guarding key cities and strategic areas in the United States.

Known as Nike B during development, Hercules is substantially faster and has a much greater range than its predecessor.

Longer, heavier and more than double the diameter of the Ajax, the Hercules model will have extreme maneuverability at much higher altitudes. It should be operational with units in the relatively near future.

Both missiles can be fired with the same guidance system.

### Lacrosse

A new member, Lacrosse, is joining the Army's family of surface-to-surface guided missiles—which already includes the Corporal, Honest John, Little John and Dart. Production has begun on Lacrosse, which has three main parts: the missile, propelled by a solid-fuel rocket motor; a launcher mounted on a 2½-ton truck; and a guidance station. Designed as a mobile, accurate close-support weapon, Lacrosse can answer calls for fire with a speed comparable to that of a 105mm howitzer. Lacrosse battalions probably will be assigned first to corps artillery, and possibly later to division artillery.

## REVISED

### New Nike Names

The Army has adopted new names for its Nike family of antiaircraft missiles. The weapons systems will be known as the Nike-Ajax instead of the Nike I; Nike-Hercules for Nike B; and Nike-Zeus for Nike II. The new names will be used throughout the Army immediately, according to a recent directive.

### Small Unit Task Forces

In line with current emphasis on atomic-warfare and mobile-forces concepts, the United States Army Infantry School's current two-hour conference and map exercise on small unit task forces has been expanded into a six-hour conference and outdoor terrain exercise. The revised problem uses helicopters to move a task force in an atomic-warfare situation.

The fundamentals of task force organization and a discussion of strengths and weaknesses of various types of motorized and helicopterborne task groupings are covered in a two-hour classroom conference. The class then moves to an airstrip where it is divided into reinforced-platoon-size groups for practical work during the remaining four hours. All students act as task force commanders during the planning phase of the operation. They plan for the composition of a platoon-size task force, its loading and employment. Upon completion of this planning and the arrival at a solution in each group, the students form into reinforced-platoon-size task forces under their own leaders, organize, draw necessary weapons and equipment, issue orders and physically participate in helicopterborne assaults of three deep objectives. Once the objectives are seized, each task force organizes a roadblock and defends its area until simulated passage of the parent unit moving by motor along two axes of advance.

Each student has an opportunity to discuss the considerations in the organization of task forces, to plan and organize a task grouping and to participate in a helicopterborne task force mission—in addition to learning about the tactical use of atomic weapons. This new version, designated Problem 2054-B6, "Small Unit Task Forces," is presented to all BIOC and OC classes.

## FIELD MANUALS

The following training literature is being written and edited; publication can be expected during the next year:

*FM 7-10, Rifle Company, Infantry Regiment,*[1] (based on new organization).

*FM 7-21, Headquarters, Headquarters and Service Company, Infantry Regiment,*[1] (based on new organization).

*FM 7-40, Infantry Regiment,*[1] (based on new organization).

*FM 21-20, Physical Training.*

*FM 21-( ), Survival.*

*FM 23-5, US Rifle, Caliber .30, M-1.*

*FM 23-15, Change 3, Browning Automatic Rifle, Caliber .30, M-1918A2.*

*FM 23-30, Hand and Rifle Grenades.*

*FM 23-82, 106mm Rifle, M-40.*

*TM 21-200,* a new technical manual for planning physical-training programs.

*TC 21-( ), Physical Training.*

*ROTCM 145-10, Organization of the Army and ROTC.*

DA pamphlet on Ranger training.

The following manual has been forwarded to USCONARC for approval:

*FM 21-75, Combat Training of the Individual Soldier and Patrolling.* When approved and published *FM 21-75* will supersede *TC 17, Battle Indoctrination,* and *TC 20, Sniper Doctrine.*

## TRAINING FILMS

The following training films have been approved for release to requesting units:

TF 7-2433, The 106mm Rifle, Part I, Introduction to the Weapon.

TF 7-2434, The 106mm Rifle, Part II, Duties of the Crew and Service of the Piece.

TF 7-2435, The 106mm Rifle, Part III, Crew Drill on Vehicular Mount.

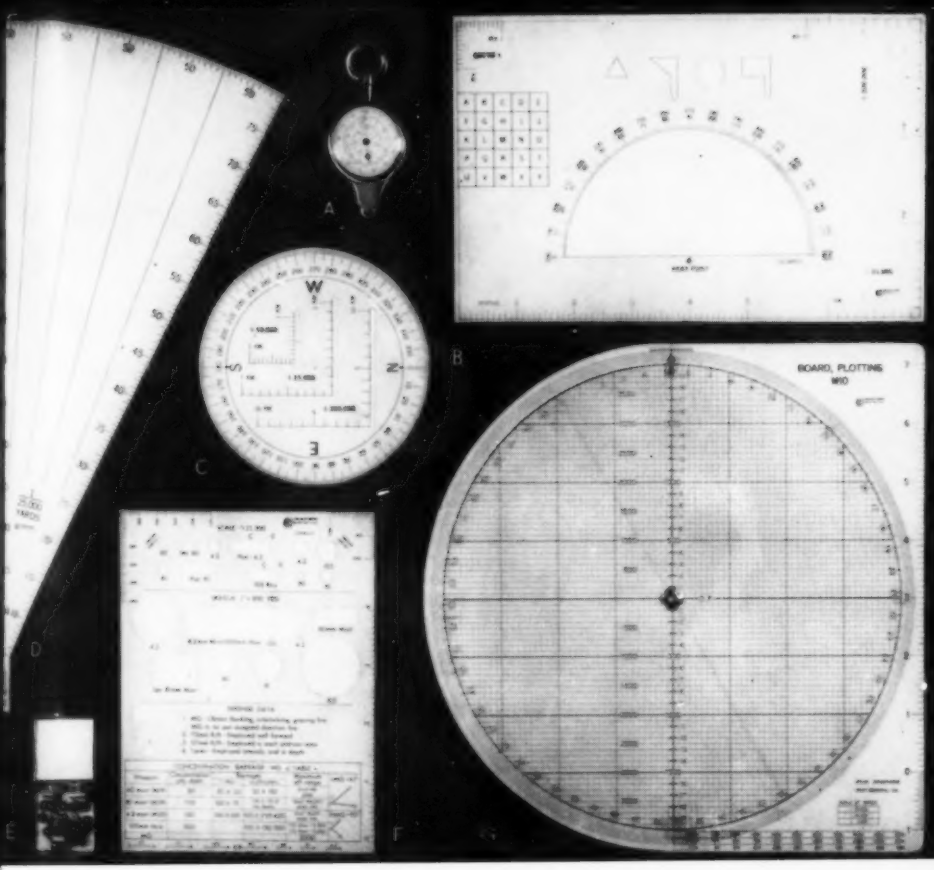
TF 7-2436, The 106mm Rifle, Part IV, Dismounting and Mounting the Rifle.

TF 7-2437, The 106mm Rifle, Part V, Using the Spotting Rifle.

(Each of the above films is about seven minutes long.)

TF 21-2197, Camouflage for Scouting and Patrolling, 30 minutes.

[1]This is current title of the draft manual. However, "Regiment" undoubtedly will be changed to "Battle Group" to conform to new organization.




# Tools for Infantrymen

Working on a tactical or gunnery problem, or a map exercise? The proper tools will help. Here are a few of the many items carried by your Book Department to make your work easier and more accurate: A. map measurer, $1.75; B. protractor with coordinate scales and target-area designator, $ .90; C. 360° protractor with coordinate scales, $ .55; D. fan-type range deflection scale, $1.05; E. map pins, $ .25; F. defensive template with weapons data, $1.15; G. M-10 plotting board, $2.10. All prices include postage and handling. If the item you need is not listed ask us about it. We probably have it in stock. If not we will try to get it for you. Write:

**Book Department, U. S. Army Infantry School, Fort Benning, Ga.**

# *In every issue:*

- *tactics*
- *doctrine*
- *techniques*

## *In this issue:*

- **So You Want a Command**
- **Helicopterborne Operations**
- **More About Trainfire I**
- **Cracking the Thought Barrier**
- **Guerilla Warfare**
- **Evasion and Escape**
- **Small Unit Task Forces**
- **Mortars & Mirrors**